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# 2014-2015 Bulletin

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# Undergraduate Catalog

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The character of the University of Dayton is defined by our search for knowledge. Knowledge that changes the way we perceive the world. Knowledge that solves problems and helps make our lives better. Knowledge that creates a more humane and compassionate future for all of us.

Whether you're investing \$14 million of the University's endowment or assisting with research that makes space exploration safer, the University of Dayton's academic programs encourage you to engage the world, developing a critical mind and a compassionate heart.

In the undergraduate academic information section, you can continue your search for knowledge — and locate specifics on various academic areas and the programs and courses they offer.

# General Information- Undergraduate

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Of course, there's more to your academic experiences than just the classes you take. In fact, the University is known for its innovative approach to blurring the lines between learning and living to create a vibrant, engaging community dedicated to moving the world forward.

Whether you're looking to learn more about admission, student services, student costs and finances or other facets of life that support your academic career, you'll find the answers here.

In this section:

- About the University of Dayton (p. 5)
- Academic Information (p. 30)
- Admission (p. 22)
- Directories (p. 60)
- Financial Information (p. 26)
- Interdisciplinary, Experimental and Special Areas (p. 45)
- Libraries and Research Services (p. 44)
- Student Life and Services (p. 12)

## The University of Dayton

In the summer of 1849, Father Leo Meyer and Brother Charles Schultz, the first Marianist missionaries to America, journeyed from Alsace in France to Cincinnati, Ohio, where they intended to establish a base for the order in this country. They arrived, however, during a cholera epidemic, so Bishop John Purcell of Cincinnati soon sent Father Meyer to Dayton to minister to the sick of Emmanuel Parish. Here he met John Stuart, whose little daughter died of cholera the year before. Mr. Stuart wanted to sell his Dayton property and return with his wife to Europe. On March 19, 1850, the feast of St. Joseph, Father Meyer purchased Dewberry Farm from him and renamed it Nazareth. Mr. Stuart accepted a medal of St. Joseph and a promise of \$12,000 at 6% interest in return for 125 acres, including vineyards, orchards, a mansion and various farm buildings. Meanwhile, more Marianists arrived, and Nazareth became the first permanent foundation of the Society of Mary in the Western Hemisphere.

The University of Dayton had its earliest beginnings on July 1, 1850, when St. Mary's School for Boys, a frame building that not long before had housed farm hands, opened its door to fourteen primary students from Dayton. In September, the classes moved to the mansion, and the first boarding students arrived. Father Meyer served as administrator, Brother Maximin Zehler taught, Brother Schultz cooked, and Brother Andrew Edel worked as farmer-gardener.

Five years later the school burned to the ground, but within a year classes resumed. By 1860, when Brother Zehler became president, enrollment approached one hundred. The Civil War had little direct effect on the school because most of the students were too young to serve. St. Mary's grew as college preparatory courses were started in 1861. Then came a novitiate and a normal school for Marianist candidates. An old history refers to the period of 1860-75 as "the brick-and-mortar years." The Chapel of the Immaculate Conception was completed in 1869. In 1870, visitors marveled at new St. Mary Hall, the largest building in Dayton, and called it "Zehler's Folly." The new "college department"

moved into it in 1871. (St. Mary Hall is now listed in the National Register of Historic Places.)

In 1882, the institution was incorporated and empowered to confer collegiate degrees under the laws of the State of Ohio. In 1883, another devastating fire visited the campus, but this time some of the buildings were saved. The statue now known as Our Lady of the Pines was erected in gratitude, and the following year St. Joseph Hall was built, symbolizing the renewed confidence of the Dayton Marianists. In a more famous emergency, the school was spared by water as it had not been by fire. Because of its hillside location, it survived the Great Flood of 1913 untouched and was able to give shelter to 600 refugees.

St. Mary's had reorganized in 1902 into four departments—classical, scientific, academic and preparatory. In 1905, it added the Commercial Department, which would become the Department of Commerce and Finance in 1921, the Division of Business Organization in 1924 and ultimately the School of Business Administration. Four engineering departments, appearing from 1909 to 1920, were to become the Engineering Division. In 1915, the Marianist training program (novitiate and normal school) was moved to Mount St. John's.

Known at various times as St. Mary's School, St. Mary's Institute and St. Mary's College, the school assumed its present identity in 1920, when it was incorporated as the University of Dayton. The same year, the elementary division was closed, the Division of Education was organized, and the University started its tradition of evening and Saturday classes to serve adults in the surrounding community. In 1922, the College of Law opened, also with evening classes. Other graduate programs followed, to augment the professional degree programs which distinguished the University from many of Ohio's other independent institutions of higher learning. In 1923, the first summer session was held; its classes, like those of the law college, were open to women as well as men.

The 1930s, with the Great Depression, were in many ways a time of retrenchment for the University of Dayton as for most other American schools. The Dayton Marianists had survived cholera, smallpox and influenza, wars, fire and flood and (in 1924) a Ku-Klux-Klan cross-burning on the campus. In 1935, even as the University turned its preparatory school functions over to Chaminade High School and graduated what was to be its last class in law for almost forty years, it inaugurated a college for women, with sisters of Notre Dame in charge of twenty-seven entering female students. Two years later, the college for women closed; all divisions opened to women, and the University became fully coeducational.

Enrollment had passed a thousand when World War II broke out. By 1950, with the return of the veterans, it reached more than 3,500. In 1967, it topped 10,000. But then, with the expansion of a community college and the establishment of a state university nearby, enrollment declined, and the resulting retrenchment was exacerbated by rising inflation and the energy crisis. Nor did the social turbulence and activism of the late 1960s and early 1970s bypass the University of Dayton. Some students and faculty protested against the Vietnam War, compulsory ROTC, and defense-related research activities. They campaigned also for changes in the curriculum, seeking more opportunities for meeting personal needs and goals. In response, the University gave greater responsibility to students for their own academic decisions, and it initiated interdisciplinary programs, self-directed learning and various experimental courses and methods. Meanwhile, the profile of the student body changed. The 1960s saw significant increases in female and minority students. In the 1970s, there was a shift to a largely residential student body, and at the same time, many more "nontraditional" (older)

students matriculated. By the mid-1970s, total enrollment steadied at more than 10,000, with about 6,000 full-time undergraduates.

The University held its first general public fund-raising campaign in order to erect Wohlleben Hall in 1958 and Sherman Hall in 1960. Both campus and off-campus residences, residence halls, apartments and houses were added and improved as such emergency accommodations as surplus Army barracks and an adapted Army hospital (renamed the West Campus) were phased out.

Long-range planning has helped integrate new buildings and old and made the campus more livable by increasing its beauty as well as its efficiency. In 1986, old and new combined in the design of the Anderson Center between Rike Hall and Miriam Hall. When fire ravaged St. Joseph Hall in 1987, the University was able to rebuild and restore it without harming the architectural integrity of that historic corner of campus. Keeping pace with the needs of the University, the Jesse Philips Humanities Center opened in 1993, and Joseph E. Keller Hall was built for the School of Law in 1997. In addition, the University has renovated Miriam Hall, converted its child care center into an early childhood demonstration school called the Bombeck Family Learning Center and completed the first phases of a modern Science Center. In 2002, the University of Dayton Arena underwent a modernization, placing it among the best venues for basketball in the country. The Donohoe Basketball Center, a major addition to the UD Arena giving UD a premier basketball facility for both playing and training, was dedicated in 1998.

As the University of Dayton entered the 21st century, it built modern student facilities, including ArtStreet and Marianist Hall (2004) and RecPlex (2006).

The edifices are not the only changes on campus. In 1960, the University reorganized academically and administratively. Administrative changes saw the formation of the College of Arts and Sciences from what had been two separate units. Other divisions became the Schools of Business Administration, Education and Engineering. In 1970, the University charter was amended and lay members now joined the Marianists on the Board of Trustees. In 1974, the School of Law reopened.

Academically, the University has continued to expand and enrich its offerings and support services, especially since mid-century. Graduate studies, abandoned during World War II, resumed in 1960, with the School of Education leading the way. In 1969, the Department of Biology inaugurated the first doctoral program since 1928. The School of Engineering introduced two doctoral programs in 1973, and in 1992, the first doctoral degrees in educational leadership were awarded. In 1997, the Board of Trustees approved a doctoral program in theology with a focus on the Catholic experience in the United States. It was the first such doctoral program on a Catholic campus nationally.

In 1975, the Marian Library, which had grown to international renown since its inception in 1943, founded the International Marian Research Institute (IMRI), which was incorporated in 1984 as a branch of the Marianum in Rome. IMRI is empowered to confer licentiate and doctoral degrees in theology, with a specialization in Mariology. The Marian Library now holds the world's largest collection of print materials on Mary, the mother of Jesus.

For all undergraduates, a general education plan was adopted in 1983 to foster integration of the liberal arts in a professional education. In 1990, the Academic Senate approved a revision of the general education requirements that called for an integrated base of four humanities courses complemented by clusters of other courses, requiring various disciplines to focus on a single theme. The Academic Senate revised and

renamed the general education requirements again in 2010 to emphasize seven mission-related student learning outcomes: scholarship, faith traditions, diversity, community, practical wisdom, critical evaluation of our times, and vocation. The Common Academic Program (CAP), taken by all undergraduates, integrates all aspects of students' University experiences beginning with courses in the Humanities Commons and culminating in a Capstone experience. The University has always maintained a tradition of innovation. In 1874, St. Mary's Institute's new Play House gymnasium was the only one of its kind in Ohio, and it is probable that the first organized basketball game in the state took place there. A system of elective studies was inaugurated in 1901. In 1924, the University was the first school to be granted a charter by the National Aeronautical Association. It was one of the first in the nation to offer a course in biophysics (1935). In 1948, it was a pioneer in student ratings of professors, and in 1952, it invited persons over 60 to attend its evening classes as guests. Its graduate program in laser optics was one of the earliest in the country. It was one of the first educational institutions to adopt electronic data-processing equipment and to offer degrees in computer science. In 1999, the University of Dayton was the first in the nation to offer an undergraduate degree program in human rights. The University is currently developing partnerships with top universities in China, including Nanjing University, one of that nation's leading research institutions.

More than just a breeding ground for academic excellence, the University also responds to the needs of society and the region.

Sponsored research at the University began in 1949 with a few faculty members and student assistants doing part-time research for industry and government agencies. In 1956, the University of Dayton Research Institute (UDRI) was formed to consolidate the administration of the growing research activities. Annual research volume has increased from \$3,821 in 1949, to more than \$85 million today. The University of Dayton ranks second in the nation in funding for materials research.

Named for Brother Raymond L. Fitz, S.M., the University's longest-serving president, the Fitz Center for Leadership in Community, founded in 2002, connects students and faculty to the community through service learning, social justice and ongoing involvement.

Among the University's other community collaborations is the Dayton Early College Academy, a public high school founded in partnership with the Dayton Public Schools. DECA, whose first class graduated in 2007, is the only charter school in the country operated by a Catholic university.

The University long-range plans include incorporating nearly 50 acres purchased from NCR in 2005. The land, lying between the academic core of campus and the Arena Sports Complex, increased the size of campus by nearly a quarter.

From its humble roots as a private boarding school for boys, the University of Dayton today ranks among the best Catholic universities in the country. It is the largest independent university in Ohio and draws students from around the country and the world.

In this section:

- Academic Calendar 2014-2015 (p. 8)
- Accreditation (p. 7)
- Degrees and Credentials Offered (p. 7)
- Institutional Memberships (p. 9)
- Mission (p. 10)



- Related University Services ([catalog.udayton.edu/undergraduate/generalinformation/theuniversityofdayton/relateduniversityservices](http://catalog.udayton.edu/undergraduate/generalinformation/theuniversityofdayton/relateduniversityservices))
- Southwestern Ohio Council for Higher Education (SOCHE) (p. 11)
- Statement of Purpose (p. 11)

## Accreditation

The University of Dayton is accredited by the Higher Learning Commission of the North Central Association of Colleges and Schools, <http://www.ncahlc.org/>, HLC phone: (312) 263-0456.

The University of Dayton is also officially accredited by the following agencies:

- Accreditation Council for Education, Nutrition and Dietetics (ACEND) for the didactic program in dietetics
- American Bar Association (ABA) for the School of Law
- Association to Advance Collegiate Schools of Business (AACSB International) for the baccalaureate, accounting and Master of Business Administration programs of the School of Business Administration
- Accreditation review Commission on Education for the Physician Assistant (ARC-PA)
- Commission on Accreditation in Physical Therapy Education (CAPTE)
- Council for Accreditation of Counseling and Related Educational Programs (CACREP)
- Engineering Accreditation Commission of ABET, <http://www.abet.org>, for programs in chemical engineering, civil engineering, computer engineering, electrical engineering and mechanical engineering
- Engineering Technology Accreditation Commission of ABET, <http://www.abet.org>, for programs in electronic and computer engineering technology, industrial engineering technology, manufacturing engineering technology and mechanical engineering technology
- Masters in Psychology Accreditation Council (MPAC) for the Master of Arts program in Clinical Psychology
- National Association of Schools of Art and Design (NASAD)
- National Association of Schools of Music (NASM)
- National Association of Schools of Public Affairs and Administration (NASPAA)
- National Council for Accreditation of Teacher Education (NCATE)

The University has the approval of the following:

- American Chemical Society
- American Music Therapy Association
- Association of American Law Schools
- Counselor, Social Worker and Marriage and Family Therapist Board
- Ohio Board of Regents
- State of Ohio Department of Education

## Degrees and Credentials Offered

The University of Dayton offers the following baccalaureate, professional and graduate degrees:

- Bachelor of Arts
- Bachelor of Chemical Engineering

- Bachelor of Civil Engineering
- Bachelor of Electrical Engineering
- Bachelor of Fine Arts
- Bachelor of General Studies
- Bachelor of Mechanical Engineering
- Bachelor of Music
- Bachelor of Science
- Bachelor of Science in Business Administration
- Bachelor of Science in Computer Engineering
- Bachelor of Science in Education and Health Sciences
- Bachelor of Science in Engineering Technology
- Master of Arts
- Master of Business Administration
- Master of Computer Science
- Master of Financial Mathematics
- Master of Laws
- Master of Mathematics Education
- Master of Physician Assistant Practice
- Master of Public Administration
- Master of Science
- Master of Science in Aerospace Engineering
- Master of Science in Applied Mathematics
- Master of Science in Chemical Engineering
- Master of Science in Civil Engineering
- Master of Science in Education and Health Science
- Master of Science in Electrical Engineering
- Master of Science in Electro-Optics
- Master of Science in Engineering
- Master of Science in Engineering Management
- Master of Science in Engineering Mechanics
- Master of Science in Management Science
- Master of Science in Materials Engineering
- Master of Science in Mechanical Engineering
- Master of Science in Renewable and Clean Energy
- Master in the Study of Law
- Educational Specialist
- Juris Doctor
- Doctor of Engineering
- Doctor of Philosophy in Biology
- Doctor of Philosophy in Educational Leadership
- Doctor of Philosophy in Electro-Optics
- Doctor of Philosophy in Engineering
- Doctor of Philosophy in Theology
- Doctor of Physical Therapy

The University also offers the following certificates, endorsements and licensures:

- Catholic Education Certificate
- Catholic School Administration Certificate
- Church Music Certificate
- Cyber-Security Certificate
- Design of Experiments Certificate



- Early Childhood Leadership and Advocacy Certificate
- Early Childhood Intervention Specialist Certificate
- Geographic Information Systems Certificate
- Non-Profit and Community Leadership Certificate
- Pastoral Care Certificate
- Pastoral Counseling for Enhancement Certificate
- Six Sigma Certificate
- Systems Engineering Certificate
- Teaching English to Speakers of Other Languages Certificate
- Technology-Enhanced Learning Certificate
- Computer Technology Endorsement
- Early Childhood Generalist Endorsement
- Middle Childhood Generalist Endorsement
- Prekindergarten Special Needs Endorsement
- Reading Endorsement
- Teacher Leader Endorsement
- Teaching English to Speakers of Other Languages Endorsement
- Adolescence to Young Adult Education Licensure
- Curriculum, Instruction and Professional Development Licensure
- Early Childhood Education Licensure
- Early Childhood Intervention Specialist Licensure
- Intervention Specialist Mild/Moderate Licensure
- Middle Childhood Education Licensure
- Multi-Age Education Licensure
- Principal Licensure
- Superintendent Licensure

## Academic Calendar 2014-2015

The University of Dayton operates under an early semester, split third-term calendar. The academic year begins with the fifteen-week fall term, which ends before Christmas. The spring term, also fifteen weeks, begins in January and ends early in May. The third, or summer term, is split into two complete sessions of six weeks each.

Students may enroll for the traditional fall and spring semesters and have a four-month summer vacation; or they may add half terms or full terms to enrich their programs or speed the completion of their degree requirements. The University issues diplomas at the end of each term and holds ceremonies in May and December. Students who must earn their own money can have extra time for employment in spring and summer; or they may enroll for the third term and work during the fall or the spring term, when the employment market is not crowded with other college students.

*Subject to change*

### FALL 2014

Date	Description
Mon, Aug 4	Degrees conferred--no ceremony
Thu, Aug 21	New Faculty Orientation
Sat-Tue, Aug 23-26	New Student Orientation
Sun, Aug 24	Upperclass students move into UD Housing
Tue, Aug 26	New Student Convocation

Tue, Aug 26	Last day to complete registration
Wed, Aug 27	Classes begin at 8:00 a.m.
TBD	New Graduate Assistant Orientation 8:30 a.m. - 4:00 p.m.
Mon, Sep 1	Labor Day-- no classes
Wed, Sep 3	Last day for late registration, change of grading options and schedules
Tue, Sep 9	Last day to change Second Session and full Summer Term grades
Wed, Sep 17	Last day to drop classes without record
Wed, Oct 8	Mid-Term Break begins after last class
Mon, Oct 13	Classes resume at 8:00 a.m.
Wed, Oct 15	Last day for Graduate and Doctoral students to apply for December 2014 graduation
Wed, Oct 22	First-Year students' midterm progress grades due by 4:00 p.m.
TBD	Family Weekend
Sat, Nov 1	Last day for Undergraduate students to apply for May 2015 graduation
Mon, Nov 10	Last day to drop classes with record of W
Tue, Nov 25	Thanksgiving recess begins after last class
Sat, Nov 29	Saturday classes meet
Mon, Dec 1	Classes resume at 8:00 a.m.
Mon, Dec 8	Feast of the Immaculate Conception/Christmas on Campus--no classes
Fri, Dec 12	Last day of classes
Sat, Dec 13	Study Day
Sun, Dec 14	Study Day
Mon-Fri, Dec 15-19	Exams--Fall Term ends after final examinations
Fri, Dec 19	University Housing closes for Christmas Break at 6:00 p.m.
Sat, Dec 20	Diploma Exercises at 9:45 a.m.
Tue, Dec 23	Grades due by 9:00 a.m.
Fri, Dec 26	Grades posted
Mon, Jan 26	Last day to change Fall Term grades

### CHRISTMAS BREAK

Date	Description
Sun, Dec 21	Christmas Break begins
Sun, Jan 11	Christmas Break ends

### SPRING 2015

Date	Description
Fri, Jan 9	Last day to complete registration
Mon, Jan 12	Classes begin at 8:00 a.m.
Fri, Jan 16	Last day for late registration, change of grading options and schedules
Mon, Jan 19	Martin Luther King, Jr. Day--no classes
Mon, Jan 26	Last day to change Fall Term grades
Sun, Feb 1	Last day for Graduate and Doctoral students to apply for May 2015 graduation
Mon, Feb 2	Last day to drop classes without record
Wed, Mar 4	Mid-Term Break begins after last class

Thu, Mar 5	Thursday only Graduate classes meet
Mon, Mar 9	Classes resume at 8:00 a.m.
Wed, Mar 11	First-Year students' midterm progress grades due by 4:00 p.m.
Sun, Mar 15	Last day for Undergraduate students to apply for August 2015 graduation
Wed, Apr 1	Last day for Undergraduate students to apply for December 2015 graduation
Wed, Apr 1	Easter Recess begins after last class
Mon, Apr 6	Easter Monday--no day classes--classes resume at 4:30 p.m.
Wed, Apr 8	Last day to drop classes with record of W
Wed, Apr 15	Bro. Joseph W. Stander Symposium- Alternate Day of Learning
Fri, Apr 24	Last day of classes
Sat, Apr 25	Study Day
Sun, Apr 26	Study Day
Mon-Fri, Apr 27-May 1	Exams-- Spring Term ends after final examinations
Sat, May 2	Doctoral/Graduate Commencement Exercises at 12:45 p.m.
Sun, May 3	Undergraduate Commencement Exercises at 9:45 a.m.
Tue, May 5	Grades due by 9:00 a.m.
Thu, May 7	Grades posted
Mon, Jun 8	Last day to change Spring Term grades

### SUMMER 2015--FIRST SESSION

Date	Description
Fri, May 8	Last day to complete registration
Sat, May 9	Saturday classes begin
Mon, May 11	Classes begin at 8:00 a.m.
Tue, May 12	Last day for late Summer Term-First Session registration, change of grading options and schedules
Thu, May 14	Last day for late full Summer Term registration, change of grading options and schedules
Wed, May 20	Last day to drop without record from First Session classes
Mon, May 25	Memorial Day--no classes
Mon, Jun 1	Last day to drop without record from full Summer Term classes
Mon, Jun 8	Last day to drop with record of W from First Session classes
Mon, Jun 8	Last day to change Spring Term grades
Fri-Sat, Jun 19-20	Exams--full Summer Term classes do not meet- First Session ends after final examinations
Tue, Jun 23	Grades due by 9:00 a.m.
Thu, Jun 25	Grades posted
Wed, Jul 1	Last day for Graduate and Doctoral students to apply for August 2015 graduation
Tue, Jul 28	Last day to change First Session grades

### SUMMER 2015--SECOND SESSION

Date	Description
Fri, Jun 19	Last day to complete registration

Sat, Jun 20	Saturday classes begin
Mon, Jun 22	Second Session classes begin
Tue, Jun 23	Last day for late Summer Term-Second Session registration, change of grading options and schedules
Wed, Jul 1	Last day for Graduate and Doctoral students to apply for August 2015 graduation
Wed, Jul 1	Last day to drop without record from Second Session classes
Fri, Jul 3	Independence Day observed--no classes
Mon, Jul 13	Last day to drop with record of W from Second Session and full Summer Term classes
Tue, Jul 28	Last day to change First Session grades
Fri-Sat, Jul 31-Aug 1	Exams--Second Session and full Summer Term end after final examinations
Mon, Aug 3	Degrees conferred--no ceremony
Tue, Aug 4	Grades due by 9:00 a.m.
Thu, Aug 6	Grades posted
Tue, Sep 8	Last day to change Second Session and full Summer Term grades

## Institutional Memberships

The University holds institutional membership in the following:

- American Association of Colleges for Teacher Education
- American Association of Collegiate Registrars and Admissions Officers
- American Association of University Women
- American College Personnel Association
- American Council on Education
- American Society for Engineering Education
- Association of American Colleges and Universities
- Association of American Law Schools
- Association of Catholic Colleges and Universities
- Association of College and University Housing Officers
- Association of Governing Boards of Universities and Colleges
- Association of Independent Colleges and Universities of Ohio
- Association to Advance Collegiate Schools of Business
- College and University Professional Association for Human Resources
- College Board
- Cooperative Education and Internship Association
- Council for Advancement and Support of Education
- Council of Graduate Schools
- Dayton Area Chamber of Commerce
- Dayton Art Institute (sponsoring)
- Institute of International Education
- National Association of College and University Food Services
- National Association of Independent Colleges and Universities
- National Association of Student Personnel Administrators
- National Catholic Education Association
- North Central Association of Colleges and Schools Higher Learning Commission\*
- Ohio Academy of Science

- Ohio Association of Colleges for Teacher Education
- Ohio Association of Private Colleges for Teacher Education
- Ohio Campus Compact
- Ohio Continuing Higher Education Association
- Southwestern Ohio Council for Higher Education

\* North Central Association  
30 N. LaSalle Street, Suite 2400, Chicago, IL 60602  
(800) 621-7440  
<http://ncahigherlearningcommission.org>

## Libraries

The University Libraries are comprised of:

- Roesch Library
- The Marian Library
- The University Archives and Special Collections
- The International Marian Research Institute

Roesch Library houses books, journals, videos, DVDs, CDs, government documents, and microforms for both graduate and undergraduate students. Roesch Library is open 114 hours a week throughout much of the academic year and 24 hours per day during finals. Reference assistance is provided in a variety of forms including in person, email, IM, telephone, and private consultations. Roesch Library subscribes to over 280 databases on a variety of subjects and provides access to more than 69,000 journals in print and electronic formats. Its book (print and electronic) and microform collections include over 1.4 million volumes.

The Libraries also provide comfortable study areas, photocopiers, and individual and group study rooms. Roesch Library has 20 computer workstations located on the first floor and 37 computer workstations located on the second floor. All workstations provide access to the campus network, OhioLINK resources, and the Internet. These computers run Microsoft Office applications, SPSS, and audio and video editing software. Group Project Space, also located on the second floor, has ten workstations equipped with double monitors that allow for group collaboration. All floors have data ports and wireless network access that allow students to access campus and information networks through notebook computers.

The Libraries are members of OhioLINK, a cooperative venture of university and college libraries and the Ohio Board of Regents. OhioLINK partners have created a common information network providing rapid access to and delivery of over 49 million items available at college and university libraries across the state. All of the libraries affiliated with OhioLINK provide on-site borrowing privileges to students and faculty associated with the University. Access to the Libraries' Web page, databases, and online catalog (<http://www.udayton.edu/libraries>).

The Marian Library (seventh floor of the Roesch Library) is recognized as the world's largest collection of published materials on the Virgin Mary. Its comprehensive collection embraces the works treating the Virgin Mary as found in Scripture, tradition, doctrine, history, art, popular culture, spirituality, and devotion. The multi-language collection includes over 95,000 books (6,000 printed before 1800), 200 periodicals, a clipping file of over 60,000 items, a Marian stamp collection, a Christmas creche collection, statues, medals, postcards, and works of art.

Publications include:

- Marian Studies (papers given at the annual meeting of the Mariological Society of America)
- Marian Library Studies (original research on Marian topics)
- The twice-yearly Marian Library Newsletter

United with the Marian Library is the International Marian Research Institute (IMRI), affiliated with the Pontifical Theological Faculty Marianum in Rome. IMRI offers courses in Marian studies as well as pontifical academic degrees (Licentiate and doctorate) in theology with specialization in Mariology. The Marian Library's collections can be accessed via the University Libraries' online catalog. Hours, an explanatory video, and information on current art exhibits can be found on the Mary Page (<http://campus.udayton.edu/mary>).

The University of Dayton School of Law Library is located in Joseph E. Keller Hall. Its collection contains over 190,000 volumes and over 676,000 physical units of microforms. The open-stack arrangement of the Law Library permits easy access to all materials. For additional information visit the webpage (<http://community.udayton.edu/law/library>).

The Brother Louis J. Faerber, S.M., Curriculum Materials Center (CMC) houses the SOEHS's specialized education collections and is located in Chaminade Hall. Its collection includes:

- Professional education books and journals
- Children and young adult literature
- Elementary and secondary textbooks
- Standardized assessments
- Teaching aids (games & manipulatives)
- DVD's
- CD's
- Videocassettes
- Audiocassettes
- LP records
- Charts
- Material kits
- Other resources

The CMC also houses research projects, theses, and dissertations completed for the SOEHS's respective graduate programs. A copier, four networked computer workstations, the Ellison Press, Accu-Cut Machine, and an assortment of letter and shape dies are available for student use.

## Mission

The University of Dayton is a comprehensive Catholic university, a diverse community committed, in the Marianist tradition, to educating the whole person and to linking learning and scholarship with leadership and service.

The University of Dayton is a comprehensive university committed to offering a broad range of programs in liberal arts, the sciences and the professions at the undergraduate level, to providing selected programs on the graduate level to meet the needs of the community and region, to sponsoring timely continuing education programs. As comprehensive, the University views learning and scholarship as a shared task of discovering, integrating, applying and communicating knowledge at the intersections of liberal and professional education, across the disciplines and through combining theory with practice.

As Catholic, the University commits itself to a distinctive vision of learning and scholarship that includes: a common search for truth based on the belief that truth can be more fully known and is ultimately one; a respect for the dignity of each human person created in the image and likeness of God; and an appreciation that God is manifested sacramentally through creation and the ordinary things in life. Ultimately, a Catholic vision of the intellectual life is based upon the acceptance of the revelation of God in Jesus Christ as it has been received and handed on by the Church.

This challenge calls for integration of the human and the divine, reason and faith, and promotes true understanding through a person's head and heart. The University welcomes persons of all faiths and persuasions to participate in open and reflective dialogue concerning truth and the ultimate meaning of life.

Founded in the Marianist tradition, the University is committed to a vision of a distinctive educational community. As Marianist, the University focuses on educating the whole person in and through a community that supports and challenges all who become a part of it. The University forms an educational community thriving on collaboration by people from diverse backgrounds with different skills who come together for common purposes. The University as Marianist challenges all its members to become servant-leaders who connect scholarship and learning with leadership and service.

This university community-comprehensive, Catholic and Marianist-exists not for itself, but to render service. The University creates an environment in which its members, working in a scholarly manner, are free to evaluate the strengths and weaknesses of their own work and the work of others. In partnership, through the Research Institute, Campus Ministry, as well as numerous student organizations, the University works with others to improve the human community.

## Southwestern Ohio Council for Higher Education (SOCHE)

Students at the University of Dayton may register for courses for credit at Southwestern Ohio Council for Higher Education institutions (see below for a complete list) at the University of Dayton's rate per credit hour. Students will pay any applicable lab or related fees at the host institution. This policy applies only if the course is not available at the University of Dayton, space in the course is available and pertains only to regular sessions of the academic year. The student also is required to have advisor's permission, must satisfy all course prerequisites and must meet the host institution's admissions requirements. For more information go to [www.soche.org](http://www.soche.org). (<http://www.soche.org>)

The consortium of 22 colleges and universities was established to promote inter-institutional cooperation and community service. SOCHE holds regular conferences for faculty and staff, serves as a clearinghouse for the exchange of information and promotes projects of educational research and experimentation. Many cooperation programs exist in:

- Teaching
- Research
- Publishing
- College finance and administration
- Other areas

Consortium member schools include:

- Air Force Institute of Technology
- Antioch College
- Antioch University Midwest
- Cedarville University
- Central Michigan University
- Central State University
- Clark State Community College
- Edison State Community College
- Kettering College of Medical Arts
- The Kettering Foundation
- Miami-Jacobs College
- Miami University-Middletown
- Miami University Regionals
- Sinclair Community College
- Southern State Community College
- United Theological Seminary
- Union Institute & University
- University of Dayton
- Urbana University
- Wilberforce University
- Wilmington College
- Wittenberg University
- Wright State University

## Statement of Purpose

Approved by the Board of Trustees, May 14, 1969.

The University of Dayton, by tradition, by legal charter and by resolute intent, is a church-related institution of higher learning. As such, it seeks, in an environment of academic freedom, to foster principles and values consonant with Catholicism and with the living traditions of the Society of Mary. Operating in a pluralistic environment, it deliberately chooses the Christian world-view as its distinctive orientation in carrying out what it regards as four essential tasks: teaching, research, serving as a critic of society and rendering public service.

The University of Dayton has as its primary task to teach—that is, to transmit the heritage of the past, to direct attention to the achievements of the present and to alert students to the changes and challenges of the future. It regards teaching, however, as more than the mere imparting of knowledge; it attempts to develop in its students the ability to integrate knowledge gained from a variety of disciplines into a meaningful and viable synthesis.

The University of Dayton holds that there is harmony and unity between rationally discovered and divinely revealed truths. Accordingly, it commits its entire academic community to the pursuit of such truths. It provides a milieu favorable to scholarly research in all academic disciplines, while giving priority to studies which deal with problems of a fundamentally human and Christian concern. It upholds the principle of responsible freedom of inquiry, offers appropriate assistance to its scholars and endeavors to provide the proper media for the dissemination of their discoveries.

The University of Dayton exercises its role as critic of society by creating an environment in which faculty and students are free to evaluate, in a scholarly manner, the strengths and weaknesses found in human institutions. While, as an organization, it remains politically neutral,

objective and dispassionate, it encourages its members to judge for themselves how these institutions are performing their proper tasks; to expose deficiencies in their structure and operation; to propose and actively promote improvements when these are deemed necessary.

The University of Dayton recognizes its responsibility to support, with means appropriate to its purposes, the legitimate goals and aspirations of the civic community and to cooperate with other agencies in striving to attain them. It assists in promoting the intellectual and cultural enrichment of the community; it makes available not only the resources of knowledge that it possesses, but also the skills and techniques used in the accumulation and dissemination of knowledge; and, above all, it strives to inspire persons with a sense of community and to encourage men and women of vision who can and will participate effectively in the quest for a more perfect human society.

## Student Life and Services

At the University of Dayton, you're not alone. And not just because you'll make friends at every turn, but because our faculty, staff and community are eager to help you along your path. To guide you, advise you and even help you land a job after graduation.

As a Catholic, Marianist institution, our educational philosophy addresses the needs of the whole person: mind, body and spirit. And you'll find a plethora of offices are here to support you every step of the way.

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- Athletics (p. 12)
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- Campus Ministry (p. 13)
- Campus Recreation (p. 13)
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## Affirmative Action Office

The Compliance and Affirmative Action Office aids in the implementation of the University's commitment to equal opportunity, affirmative action and diversity. This office ensures campus compliance with Federal, State and Local laws pertaining to non-discrimination and affirmative action.

## Athletics

Many people throughout the country have come to know the University of Dayton through the accomplishments of its intercollegiate athletic teams. The mission of the Division of Intercollegiate Athletics at the University of Dayton reflects the mission of the University. That mission is embodied in the following core purposes:

- To educate the total person by integrating the primary academic purposes with educational possibilities and opportunities for young people beyond the classroom
- To teach the value of community and family through collaboration and teamwork
- To instill the fundamentals of sportsmanship, adhering to the values of respect, fairness, civility, honesty and responsibility
- To teach the tools of achievement, including self-discipline, personal responsibility and the setting of high standards
- To develop the individual talents of our student-athletes within the context of shared team goals
- To enhance diversity and minority opportunity at the University of Dayton
- To advance the University of Dayton locally, regionally and nationally through the more highly visible sports, particularly the men's basketball program

There are seven men's intercollegiate sports:

Fall

- Football
- Soccer
- Cross Country

Winter

- Basketball

Spring

- Baseball
- Golf
- Tennis

There are ten women's intercollegiate sports:

Fall

- Volleyball
- Soccer
- Cross Country

Winter

- Basketball
- Indoor Track



## Spring

- Softball
- Rowing
- Golf
- Tennis
- Outdoor Track

Cheerleading tryouts, open to all students, are held each year.

Any student, male or female, who plans to participate in a varsity sport, must be certified through the NCAA Initial-Eligibility Clearinghouse. Additionally, student-athletes are required to complete a physical examination and provide documentation of their medical history and current insurance coverage.

The University of Dayton and its Division of Athletics are committed to abiding by the rules of the NCAA and the Atlantic 10 Conference. The volume and complexity of the NCAA rules prohibits addressing all the possible scenarios that may impact athletic eligibility. Therefore, you are encouraged to visit the Dayton Flyers website and NCAA to access the various rules and policies which assist our University in continuing to operate with honor and dignity.

Please do not hesitate to contact the Compliance Staff if you should have any questions.

University of Dayton  
Athletics Division Compliance Office  
300 College Park  
Dayton, OH 45469-1230  
Phone: (937) 229-4861  
Fax: (937) 229-4969

## Bookstore

The University of Dayton Bookstore is a service facility operated by the University. Its primary purpose is to provide for the intellectual needs of the University community by making available all required textbooks and by providing a source for essential engineering, art and academic supplies which students need in their areas of study.

American Express, Discover, Flyer Express, MasterCard, Visa and personal checks are accepted with proper I.D.

## Campus Ministry

Faith formation and reflective religious dialogue play important roles in the education and development of the whole person at the University of Dayton. As a primary agent in faith formation at UD, Campus Ministry, inspired by the University's Marianist tradition, forms persons and communities in a lived faith, expressed in worship, in challenging and compassionate relationships and in commitment to justice and service.

With thirty staff persons and a wide variety of programs, UD has one of the largest and most active campus ministry programs anywhere.

Informed by the Roman Catholic Tradition, the vast majority of our programs appeal to students from different Christian backgrounds and those of other faiths. A full-time protestant campus minister serves as a part of the campus ministry team. Campus Ministry also connects students from other faith traditions to their respective faith communities off campus. A number of independent, religiously based student

organizations exist on campus. Together, these provide a range of options and opportunities for students to be a part of a faith community during their time at UD.

Our primary activities for students are outlined below.

### Residence Life Ministry

Each residential area has campus ministers who actively engage students in faith based activities. Student leaders guide participation in activities such as faith sharing groups, bible studies, retreats, Mass, service and social opportunities and other prayer experiences. In these and other ways, campus ministry is able to accompany, encourage and support students in areas of leadership, personal growth and spiritual development.

### Center for Social Concern

Campus Ministry's Center for Social Concern is committed to faith-based social justice education, including direct service to the poor and marginalized, work on behalf of social justice and changing unjust structures in society that oppress and marginalize human beings. The Center for Social Concern provide regular BreakOut Trips, Summer Immersion Trips and the Summer Appalachia Program, offer opportunities for service and justice education in domestic and international settings. Guest speakers and a number of other activities also contribute to these goals. At the heart of it all is a wide array of opportunities to reflect on the service and justice work in the context of faith.

### Retreats and Faith Communities

Over twenty retreats are offered each year for UD students. The retreats vary in size, style, theme and focus to provide opportunities for faith development in many ways. There are quiet relaxing guided retreats, wilderness retreats, retreats specifically for first-year students and graduate students, large community focused retreats, interdenominational retreats and more that foster faith development through activities, discussion and prayer. Most retreats are led by student teams who prepare through weekly meetings.

Students also join small Christian communities called PORCH. These student led groups meet regularly and focus in unique ways including faith sharing, scripture study and theological reflection.

Campus Ministry's Program for Christian Leadership offers Callings, a pre-orientation experience for incoming first year students focused on fostering faith, vocation and leadership for new UD students as well as PORCH communities, retreat and leadership experiences.

### Liturgies and Prayer

Students, faculty, and staff are active in the liturgical life of the University as lectors, Eucharistic ministers, music ministers, Mass coordinators and hospitality ministers at both daily and Sunday celebrations of the Eucharist. The sacrament of Reconciliation and Eucharistic adoration are scheduled regularly, and during the seasons of Advent and Lent, sung weekly Vespers are offered along with communal Reconciliation services. An interdenominational Christian worship service is held every Sunday during the academic year. Other opportunities for worship are available in the local community.

## Campus Recreation

The Department of Campus Recreation is located on the "M" level of the RecPlex. The RecPlex, which opened in January 2006, houses a state

of the art recreation facility. Full time undergraduate students are eligible to use the RecPlex with their UD student ID. The facility may be used by graduate students who purchase a RecPlex Membership. Highlights of the building include:

- Main Gym with four full sized wood court basketball courts and three racquetball courts, one of which can be converted for squash.
- MAC Gym with two rubberized courts surrounded by a professional grade dasher board system adequately sized to play a variety of sports including tennis, indoor soccer, basketball, volleyball and floor hockey.
- Aquatic Center with a 25 yard eight lane lap pool, four foot deep vortex leisure pool, diving well and an eight-person spa.
- Fitness Studios A, B, and C which are used for a variety of instructional and group fitness classes.
- 10,000 sq. ft. Fitness Floor is home to 80 cardio machines and 70 strength training stations.
- Wellness Assessment Lab from which services such as athletic training, massage and personal training consultation are offered.
- Four lane 1/8 of a mile rubberized jogging track.

Campus Recreation is excited to feature a new 5+ acre outdoor facility due to the installation of an infill turf surface. This new resource matches the quality of the RecPlex and provides year round access and a consistent surface for sports programming.

Campus Recreation offers many programs and facilities for students, including:

- Intramural Sports
- Sport Clubs
- Aquatics
- Fitness Programs
- Climbing Wall
- Strength and Cardio Equipment

Campus Recreation provides a variety of intramural activities in which anyone can find exercise surrounded by a spirit of fun and competition which is uniquely enhanced by our Marianist values. Activities include:

- Softball
- Flag Football
- Indoor and Outdoor Soccer
- Volleyball
- Basketball
- Dodge-ball
- Bowling
- Racquetball
- Golf meet
- Wallyball
- Floor Hockey

All students are invited to participate; ability is not important, just the desire to play. Please contact us at [udintramurals@udayton.edu](mailto:udintramurals@udayton.edu) ([udintramurals@notes.udayton.edu](mailto:udintramurals@notes.udayton.edu)).

Another popular feature of the Department of Campus Recreation is the Sports Club Program. Currently, there are 36 recognized sports clubs on campus. The Sports Club Program offers students the opportunity to participate in a highly organized activity, while at the same time learning

and developing new skills. Anyone interested in joining a sport club or starting a new one is encouraged to come in and speak with the Assistant Director of Sport Clubs.

Schedules concerning open recreation hours and scheduled events may be secured from the Campus Recreation Office. For more information please visit the website (<http://campus.udayton.edu/~recsport>) or call 229-2731.

## Career Services

The University of Dayton Career Services is a team of dedicated, caring professionals committed to providing excellent career related-resources, programs, services and opportunities that build confidence and job search skills. We serve as a connecting point between students, faculty, alumni and employers in an increasingly diverse and globally influenced job market. We are a leader in career planning and preparation, balancing the latest technology with personal guidance in the Marianist tradition.

Career advisors are available to discuss:

- Major selection
- Career direction
- Job search strategies
- Resume critique
- Networking
- Graduate school strategies
- Interview tips

Practice interviews with a career advisor can be digitally recorded and evaluated upon request to prepare the student for actual interviews by company representatives. All students, including first year students, are encouraged to utilize the services available. Appointments may be made by calling (937) 229-2045.

The Hire a Flyer Network is available from the Career Services web site for students to access job listings, post resumes and register for events such as workshops, career fairs and on-campus interviews with employers. Students may also access the Alumni Career Network through Hire a Flyer.

Career Fairs are scheduled Fall and Spring semesters for all majors. These events provide an opportunity for employers, students, and alumni to meet and discuss job opportunities. Approximately 150 companies attend looking for internship, co-op and full-time employees.

The on-campus recruiting program is open to all students and alumni. On-campus recruiting is held October-April each year.

In addition, Career Services offers other venues for students to interact with employers as well as mini-courses, workshops, and presentations on a wide variety of job search and career related topics.

Additional information is available online (<http://careers.udayton.edu>).

### Career Related Experiences

The goal of any career related experience is to provide practical work experience associated with a student's course of study and/or life experience. All students pursuing a four-year degree should consider one or more of these programs.



- Internships
- Career-related summer employment
- Cooperative education
- Student contract program positions
- Externships and/or job shadowing
- Community/service learning
- Volunteer opportunities
- International placement or study/work abroad opportunities

Internship, summer employment, cooperative education, and student contract program positions are posted in Hire a Flyer. This online system is available at no charge to all students and alumni and may be accessed from the Career Services website (<http://careers.udayton.edu>).

## Center for International Programs

The Center for International Programs at the University of Dayton provides leadership, strategic planning, coordination and administrative support for the internationalization of campus. In cooperation with other University departments and external organizations, the CIP operates programs and provides services which enhance intercultural education at the University of Dayton and prepares our students as distinctive global citizens ready to learn, lead and serve in the world. The CIP is part of Academic Affairs and Learning Initiatives, under the Office of the Provost. Our areas include:

### Campus Engagement

Campus Engagement directs and supports the coordination of programs and initiatives, infrastructure development, and campus partnerships that foster intercultural engagement and development for faculty, staff and students. In addition, campus engagement, through planning and collaboration, guides the communication strategy for the center.

### Education Abroad

Education Abroad provides guidance and expertise for education abroad advising, faculty-led program design and delivery, exchange opportunities and risk management. Education abroad focuses on increasing access to and quality of global experiences for undergraduate and graduate students, and faculty by engaging them in study, research, work and service experiences abroad.

### International Student and Scholar Services

International Student and Scholar Services provides students and exchange visitors with immigration advising, workshops and orientation, as well as social and extracurricular activities. ISSS extends its services and support to international faculty and research scholars and their dependents. Through collaboration with other departments and organizations, ISSS advocates on behalf of international students to ensure their academic, personal and career goals.

### Intensive English Program

The Intensive English Program welcomes a diverse community of international learners to prepare them for success in their academic careers by providing English language instruction rooted in best practices. IEP's diverse team of TESOL professionals guides students toward autonomy as they learn, explore and practice the habits necessary for success in U.S. higher education.

### Partnerships and Exchanges

Partnerships and Exchanges seeks, builds and maintains relationships with institutions and organizations all over the world for the purpose of

increasing direct global opportunities for UD faculty, staff, students and partners abroad. Partnerships and Exchanges supports activities that include education abroad programs, joint international research, dual degree agreements, faculty mobility to teach and achieve professional development and other special enrollment programs.

## Community Wellness Services

Community Wellness Services supports and enhances the mission of the University of Dayton by promoting learning and personal development in the seven dimensions of wellness, providing alcohol and other drug interventions for students and consultation to faculty and staff in these areas.

Through prevention and intervention, the student is guided to create a balanced lifestyle to contribute to their optimal personal development. Community Wellness Services utilizes science based wellness promotion strategies to support the Marianist principles of community living and contribute to the educational mission of the University.

Community Wellness Services is located on the first floor of Gosiger Hall and in the McGinnis Center. Phone (937) 229-1233. Hours are 8:30 a.m. - 4:30 p.m. Monday - Friday. The main mailing address is Community Wellness Services, 300 College Park, Dayton, OH 45469-2610.

## Commuter Student Services

Commuter Student Services provides an essential aspect to the University of Dayton campus. Commuter students knowledge and pride of the Dayton area help make out-of-town students feel more comfortable and at home while at the University. A lounge for commuter students is located in Kennedy Union 118 which is used for study, relaxation and meeting friends. A telephone, microwave and refrigerator are provided for the convenience of commuter students. Lockers are also available in the lounge and can be rented on a yearly basis.

The advisor to the commuter students provides services and facilities to meet the educational, developmental and physical needs of these students and maintains contact with the academic and nonacademic areas of the University to increase understanding of these specific needs.

## Counseling Center

The main purpose of the Counseling Center is to assist students in self-development, including personal adjustment, career planning and social skills building. All students in need of objective insights or merely "a listening ear" are encouraged to make use of the Center's services. No student's concern is too minor to explore. This is usually accomplished through one-to-one and group counseling, although there are opportunities for workshops on certain topics, consultation and outreach programming for student, faculty and staff groups. The Center also provides career and personality testing services.

Because counseling often involves sensitive personal matters, discussions between counselors and students are strictly confidential. An exception occurs when students' problems become life threatening. The University and the student may enter into a contract to establish conditions regarding required treatment/assessment, if there is imminent danger. The student may decide to use the services offered by the University or to receive treatment elsewhere. In the latter case, periodic review by the University is required to confirm that contract conditions are met. For the welfare of the student, problems warranting treatment more

intensive than the University can offer may require temporary medical withdrawal from the University. The student may be readmitted to the University upon acceptable completion of contract conditions. In life threatening circumstances, the University assumes the position that the parents or guardians of the student generally should be notified, and it will initiate such notification if the student has not done so within an appropriate time, refuses to do so, or is unable to do so. Other exceptions to confidentiality include a) receiving a court order, and b) when evidence suggests abuse or endangerment to a person under the age of 18 or over 60.

Matriculating undergraduates, graduate assistants and law students are eligible for services at no charge. Other graduate students, Intensive English Program participants and non-matriculated undergraduate students pay on a fee-for-service basis. Contact us for information about charges and services. The Center is accredited by The International Association of Counseling Services, Inc.

## Dining Services

The University of Dayton Dining Services operates two full-service a la carte student dining facilities located in Kennedy Union and Marycrest Complex, and two restaurants, Passports and The Grainary, located in the V.W. Kettering Residence Hall. The Emporium, a mini grocery store with a full service deli, is located in the Marianist Residence Hall, and Stuart's Landing, a convenience store, is located in Stuart Hall Complex. Dining Services also operates The Galley, a pretzel/ ice cream/ gourmet coffee shop located in Kennedy Union, and The Chill, a juice bar with healthy snack options, located in The RecPlex. All students living in Marycrest, Stuart, Founders, Marianist and Virginia Kettering Residence Halls are required to purchase a meal plan. Meal plan options are as follows:

- **Standard Plan** – This structured meal plan has a spending allowance associated with it during specific meal periods. If you don't spend the entire allowance for that meal, you lose it. This plan starts with breakfast the first day of classes.

**Note:** Only one block of funds may be used during each meal period. For example, two blocks may not be used during the lunch meal period on the same day.

- **The Flexible Plan**- This is a debit style meal plan and provides complete flexibility, with no specific meal periods and no spending allowances.

**Note:** There are no refunds on debit plan balances however, 100% of balances remaining at the end of fall semester will roll over to the spring semester. At the end of spring semester 50% up to a maximum of \$300 will roll over to the next school year. Plan participation charge applies.

All students living in residence halls must have one of the following:

- **Standard Plan** (3 blocks per day, 7 days) \$2,370.00/ semester
- **Flexible Plan** (debit account) \$2,370.00/ semester

For complete information on meal plans, please visit <http://dining.udayton.edu>

When a student does not choose a meal plan the default plan is the Flexible Plan.

Non-resident students may purchase a Neighborhood meal plan (debit account).

## FlyerCard

The FlyerCard is the official photo identification card at the University of Dayton. Your FlyerCard must be presented for purchases using your FlyerCard account(s), admission to the RecPlex, library services and building access.

Your FlyerCard can be used as a form of payment for food, textbooks, supplies, laundry, printing and other essential services. It is safe, fast and convenient to use. You can view your transactions and the balance of your accounts by choosing the "My Account" link (<https://flyerexpress.udayton.edu>).

To get your FlyerCard, stop by the Campus Card Services office located in room 102 of the Powerhouse. The first FlyerCard received is issued at no charge. All students must be registered for classes before receiving their card. Visit the FlyerCard website (<http://FlyerCard.udayton.edu>) for a detailed view of the FlyerCard program.

### Flyer Express

Flyer Express is a declining-balance prepaid account accessed with your FlyerCard. It is the convenient way to pay for products and services on and off campus. Your Flyer Express account eliminates the need to carry cash and saves you the hassle of searching for correct change. Flyer Express has you covered with whatever you need, 24 hours a day, 365 days a year. It is safe, fast, and convenient to use. The money in your Flyer Express account is carried over from one semester to the next and from year to year.

The Card Services office offers you multiple options to deposit funds into your account.

- Online (<https://flyerexpress.udayton.edu/AddFlyer.aspx>)
- Phone: (937) 229-2456 or 1-800-259-8864 (option 4)
- In person at the Campus Card Services office in the Powerhouse or the Bursar's office in St. Mary's Hall
- At kiosks located in all Dining Services locations and the Roesch Library.

Flyer Express is accepted at:

- All Dining Service locations
- Art Street Cafe
- UD Bookstore
- Residence Hall laundry
- Campus Copy Center
- Selected vending areas
- The Hangar
- The Galley
- Stuart's Landing
- Campus Computer Store
- Roesch Library
- Post Office
- The Chill
- KU Box Office
- The Blend
- The Blend Express
- Selected off campus businesses.

Flyer Express is used to pay for printing in the Library and many computer labs. Visit the FlyerCard website (<http://FlyerCard.udayton.edu>) for a current listing of off campus vendors that accept Flyer Express.

## Health Center

Medical care is available at the Health Center to all full-time and part-time undergraduate, graduate and law students. During the academic year, the Health Center is open from 8:30 a.m. to 5:30 p.m. on weekdays, except University holidays. A physician is available for consultation every weekday morning and afternoon throughout the year, except University holidays. Summer hours are 8:30 a.m. to 4:30 p.m. with limited physician hours. Students should call the Health Center to schedule an appointment at 93131 or (937) 229-3131. In case of emergency, call Public Safety, (937) 229-2121.

Pre-admission physical examinations are not required, but students with chronic health problems are advised to have their physicians send records or recommendations to the medical director. Every student born after 1955 is required to show evidence of immunity to measles, mumps, and rubella. All students are required to fill out a tuberculosis screening. Students living in on-campus housing also have specific requirements for meningitis and hepatitis B vaccines, specified by Ohio law. A link to the Health Requirements form is located on the Health Center website (<http://www.udayton.edu/studev/healthcenter>).

Undergraduate and law students are eligible for Health Center services at no extra charge. Graduate and IEP students pay on a fee for service basis at the Health Center. The charge for a physician visit ranges from \$45 to \$75, depending on the length of the visit and the type of services provided. Charges for medicines dispensed, allergy injections, laboratory tests and x-ray examinations are billed to ALL STUDENTS.

The University believes it is the responsibility of each student to have health insurance and therefore expects students will have it for the entire time they are enrolled. Having health insurance protects both the student and the community. International students are required to provide evidence that they have health insurance that will cover them the entire time they are a student at the University of Dayton. The University is not responsible for covering health care costs.

All charges incurred at the Student Health Center are reported to the Bursar to be entered on the student's account with the University. Inquiries regarding bills should be made at the Health Center between 9:00 a.m. and 3:00 p.m. weekdays. Itemized statements can be provided upon patient request. These are not automatic and the Health Center does not bill outside insurance companies directly, however students should bring a copy of their health insurance/pharmacy cards to each visit.

## Housing and Residence Life

One of the most challenging and growth-oriented experiences available to students is residential living. The University strives to provide a co-curricular environment that both supports and challenges students to reach their full potential. Understanding, mutual respect and openness to diversity foster the development of a positive community.

In order to attain this goal, professional, graduate and undergraduate staffs in the Department of Housing and Residence Life are creating living and learning environments within University residence halls, suites, apartments and houses. A student elected governance board or council

represents residential student opinions and assists the residence life staff in providing programmatic initiatives for each on-campus living area.

All first-year and second-year students are required to live in UD housing unless they are married, are twenty-one years of age or older, or are local residents living with their legal guardian at their permanent residence within 40 miles of the University of Dayton campus. Junior and senior students have the opportunity to live in UD apartments and houses or to choose to live in non-University housing.

Upon official acceptance to the University of Dayton, the Office of Enrollment Management provides students with information and instructions for securing residential living accommodations. Questions regarding housing can be directed to Housing and Residence Life at (937) 229-3317 or email [housing@udayton.edu](mailto:housing@udayton.edu) ([housing@notes.udayton.edu](mailto:housing@notes.udayton.edu)) or visit the Housing and Residence Life website (<http://housing.udayton.edu>).

## International Student and Scholar Services Office

The International Student and Scholar Services Office provides students and exchange visitors with immigration advising, workshops, orientation, academic and non-academic advising, as well as social and extracurricular activities. ISSS extends its services and support to international faculty and research scholars and their dependents. The ISSS works collaboratively with other departments and organizations to advance the University's commitment to building a global community.

ISSS also presents Bridges, the international student orientation, every August, January and May. All international students new to the University of Dayton must attend. During Bridges, ISSS assigns immigration check-in times to students. Completing immigration check-in is vital to maintaining F-1/J-1 status. All new undergraduate international students are also required to attend the University's New Student Orientation, for all new undergraduate students.

## Center for Student Involvement - Kennedy Union

A variety of cultural, educational, social and recreational activities are presented in Kennedy Union to enrich and enhance campus life and foster a spirit of community. In addition, the Center for Student Involvement provides support, direction and programming opportunities for students and recognized student organizations. Activities in the union include game shows, trivia contests, movie nights, concerts, theatrical productions, lectures, dance ensembles, performances and recitals by students and faculty members. Meeting rooms, the Ballroom, Boll Theatre and University vans are available for use and can be reserved by calling 229-3333 (Kennedy Union Room 241). Information about student organizations can also be found at [go.udayton.edu/involvement](http://go.udayton.edu/involvement) or by calling 937-229-3333 (Kennedy Union Room 241).

The John F. Kennedy Memorial Union, centrally located on the campus, offers comfortable surroundings and a variety of services for the University community. Lounges provide space for discussion, studying and socializing. A lounge for commuter students is located on the first floor, with lockers available for rent. The Hangar games room on the ground floor includes bowling lanes, pool tables, lounge space, a cafe and video games. The food court, automatic teller machines, charging stations, display cases and vending machines are housed in the Union,

as are student offices for the Student Government Association, Campus Activities Board, Christmas on Campus, Daytonian Yearbook, three values-based Greek Councils, Flyer News, Flyer TV, Orpheus literary magazine and the Campus Concert Committee. Also in the union are the Information Center, Box Office, the Copy Center, KU Dining Services, Catering Services and the Travel Office.

The Center for Student Involvement is responsible for registering all student organization-sponsored events, granting recognition to student organizations, providing resources and support for organization advisers, publicity approval and coordinating campus-wide events. The office works directly with commuter students, Student Government Association, IFC, NPC, NPHC, Flyer News, Flyer Radio, Daytonian Yearbook, Orpheus, Campus Activities Board, the Charity Concert Committee, Christmas on Campus, the Campus Concert Committee and all additional recognized student organizations.

## Office of Community Standards and Civility

The Office of Community Standards and Civility administers the policies of the University of Dayton. Our primary focus is on helping students learn from the consequences of their actions and become a positive influence within the University of Dayton community and beyond.

The Standards of Behavior that guide our life together are:

### **Support of the Academic Community and the Development of the Whole Person**

All students at the University of Dayton are expected to live and work in support of our academic mission and of the Marianist tradition of Catholic education, which is committed to the holistic formation of spirit, mind and body.

### **Community Living**

Living in community is essential to the full development and education of the whole person. Building and sustaining the community we all treasure at the University of Dayton requires more than friendliness and is certainly about more than following rules. All students learn and apply essential life lessons about self-awareness, communication, cooperation, mutual respect, courage, forgiveness, patience and trust while living in community with others.

### **Dignity and Respect for All Members of the Community**

Every person has innate dignity as all are made in the image and likeness of God. This understanding calls all members of the UD community to respect and love themselves and others.

### **The Common Good**

The common good at the University of Dayton is defined as the sum total of social conditions which allow people, either as groups or individuals, to reach their fulfillment more fully and more easily. A concern for the common good leads us to make individual choices in light of how they affect, or may affect, other people and the community as a whole. Students are called to work actively to create and promote the common good at UD and beyond.

Visit the Community Standards and Civility web site to read about our Standards of Behavior in greater detail and to learn more about this department.

## Office of Multicultural Affairs

The University of Dayton is committed to creating an environment that celebrates cultural diversity while focusing on the Marianist philosophy of service, leadership and community. The Office of Multicultural Affairs, in the division of Student Development, provides facilities and services to support the academic achievement of multicultural students and assists in enhancing the understanding that all UD students have of themselves and others through co-curricular experiences. Staff members in the Office of Multicultural Affairs collaborate with campus and community partners to provide a nurturing community that promotes academic success.

Major programs and services offered by the Office of Multicultural Affairs (OMA) are listed below:

**Academic Excellence** - Support is offered to students through academic consultations, tutoring and workshops. The OMA works in collaboration with other academic and student service offices to assist students in achieving their academic goals.

**Cultural Programming** - The OMA recognizes the histories, cultures, experience and contributions of diverse populations through a variety of programs and initiatives. Cultural programming offered by OMA and in collaboration with other departments supports the University of Dayton's academic mission by providing educational opportunities that assist students in exploring new experiences while also enhancing their understanding of the cultural identity.

**Leadership Development** - A variety of leadership initiatives are offered, including the annual OMA Retreat and Colors of Leadership Conference. The leadership skills of students involved with multicultural student organizations are enhanced through group and individual meetings that occur on a monthly basis.

**Office of Multicultural Affairs Staff & Facility** - Staff members who work with the OMA are excellent resources. Stop by the office to speak to a staff member or to use the facility to study or socialize. Ample study and programming space is available in OMA, which is located on the first floor of Alumni Hall. Contact OMA at 937-229-363 or oma@udayton.edu to reserve space or to inquire about after-hours access.

**Social Justice and Inclusion** - The Office of Multicultural Affairs provides opportunities for student, faculty and staff to participate in critical dialogue around difference and social justice. Participants can attend presentations, brown bag discussions, mini-conferences and other events to gain skills and resources on how to lead and participate in difficult conversations.

## Office of Student Learning Services

The Ryan C. Harris Learning Teaching Center (LTC) Office of Student Learning Services is Your Partner in Learning. We offer a wide variety of services designed to meet individual learning needs. Services offered through OLR are free of charge for all students.

### **Academic Coaching and Consultations**



Discuss goals, motivation, transition to college and study skills. Obtain referrals to campus and community resources. Request an informal disability screening.

### Courses offered

DEV 055

UDI 175

UDI 145

### International Student Learning Support

Meet with staff or peer coaches, individually or in groups, or attend a seminar to develop skills for learning in a diverse community.

### Tutoring

Take advantage of tutoring with trained peer tutors for selected courses. Available to all students during listed hours.

### Services for Students with Disabilities

Meet with disability specialists for individual consultations, disability management, and services including academic and testing accommodations, alternative formats, and assistive technology with training.

### Supplemental Instruction

Attend regular group study sessions led by trained leaders who help students master course material. Available in selected courses.

### Online Resources

Check out the OLR website for study tips, self-assessments, apps, learning technologies and other resources including the full Learning Support Guide: [go.udayton.edu/learning](http://go.udayton.edu/learning)

### The Write Place

Offers peer-to-peer writing consultations during afternoon and evening hours. Online feedback on writing is also available. Visit the Write Place web site at: [go.udayton.edu/writeplace](http://go.udayton.edu/writeplace)

## Office of Student Learning Services: Students with Disabilities

The University of Dayton is committed to including all university students with disabilities as full participants in its programs, services and activities. The University complies with Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act (ADA) of 1990, and the ADA Amendments Act (ADAAA) of 2008.

Services for students with disabilities at the University of Dayton are provided through the Ryan C. Harris Learning Teaching Center (LTC) Office of Learning Resources (OLR). OLR strives to ensure that students with disabilities have equitable access to opportunities at the University of Dayton so they can participate freely and actively in all facets of university life. OLR provides access to programs and services through academic, housing and testing accommodations; individual consultations; on-going

disability management; and production of alternative format course materials. For students with disabilities, OLR:

Encourages the development of self-advocacy and self-determination skills.

Assists in the interactive process between students and faculty for determining and implementing reasonable accommodations.

Ensures registered students with disabilities access to university programs and services through reasonable accommodations to students with disabilities registered with OLR.

OLR does not provide special, structured programs specifically for students with disabilities.

Assists the university community in understanding the concept and the realities of disability and in working to eliminate barriers that limit the opportunities for students with disabilities at the University of Dayton.

Assists the university in complying with the provisions of Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act (ADA) of 1990, and the ADA Amendments Acts (ADAAA) of 2008.

For more information about OLR services for students with disabilities, please visit the OLR website (<http://www.udayton.edu/lrc/learningresources/#3>). (<http://www.udayton.edu/lrc/learningresources/#3>)

### The Academic Accommodation Process

Students with disabilities are entitled to reasonable accommodations from the University of Dayton. At the post-secondary level, reasonable accommodations cannot fundamentally alter the essential functions of a course, program or service. Students who are interested in discussing academic accommodations for the first time can complete the Initial Accommodation Request form online ([https://udayton-accommodate.symphony.com/public\\_accommodation](https://udayton-accommodate.symphony.com/public_accommodation)). This form allows OLR to gather information about your potential needs in the academic, housing, dietary and parking areas. Once eligibility is determined the student will meet with OLR staff and an accommodation letter which outlines specific needs will be created. This accommodation letter will be used by the student as an aid in discussion of accommodations with their professors. This letter identifies recommendations for reasonable accommodations based upon consultation between the student and OLR staff and outlines specific, individual needs. Since all students are ultimately responsible for their own academic achievement, the decision of whether to use recommended accommodations is the student's responsibility.

### Registration with OLR

The LTC's Office of Learning Resources (OLR) asks students who wish to make an official request for disability accommodations to contact OLR disability staff to discuss the barriers/difficulties they anticipate, or are facing, and the kinds of accommodations that may be appropriate while attending classes and participating in community life at the University of Dayton. It is the responsibility of the student to make their request for accommodations known in a timely manner.

OLR has established an interactive process that will enable us to work together to determine reasonable accommodations. The goal of gathering information from the student and other key sources is to assist in establishing an understanding of the disability, how disability may

impact a student, and making informed decisions about accommodations to provide effective access.

The best method for addressing this process is through direct interaction between the student and the experienced disability professional. The weight given to the individual's description will be influenced by its clarity, internal consistency, and congruency with the professional's observations and available external documentation. However, if the student is unable to clearly describe how the disability is connected to a barrier and how the accommodation would provide access, the institution may need to request third party documentation.

Visit the Disability Services website for information on the Interactive Accommodation process. (<http://www.udayton.edu/lrc/learningresources/#3>)

Please contact OLR for assistance with submission with other delivery options.

Phone: 937.229.2066 TTY 937.229.2059  
Email: [disabilityservices@udayton.edu](mailto:disabilityservices@udayton.edu)

University of Dayton  
Office of Learning Resources  
Attn: Disability Services  
300 College Park  
Dayton, OH 45469-1302  
Fax Number: (937) 229-3270

For additional information on OLR services see the section in this Bulletin entitled "Office of Learning Resources" or visit the OLR website (<http://www.udayton.edu/lrc/learningresources>).

## Privacy Rights of Parents and Students

In compliance with Section 438 of the General Education Provisions Act, the University of Dayton has published regulations designed to protect the privacy of parents and students as to the access and to the release of records maintained by the institution.

## Public Safety

The Department of Public Safety seeks to provide a safe and secure environment for the entire University of Dayton community, which includes the students, faculty, staff and visitors. The department provides police, parking and emergency medical services to the U.D. campus community. The Student Cadet program is also operated by Public Safety. Public Safety offices are located on the ground floor of College Park Center at 1529 Brown St.

### Police

Police operations include enforcement of laws and campus regulations, criminal investigation, crime prevention and providing for the physical security of University of Dayton property and interests. The department has primary jurisdiction for law enforcement and criminal investigation on all University of Dayton owned or controlled property, and all public property within the defined campus boundaries according to the mutual aid agreement with the City of Dayton Police Department. Police officers are all graduates of the Basic Police Academy and are sworn law enforcement officers, the same as their municipal counterparts. All

full time police officers are required to maintain certification to provide emergency medical services to the campus community.

Emergency assistance is available 24 hours per day, seven days a week. Call 911 in the event of an emergency, or 229-2121 for all other assistance. (Non UD Network Phones will call the City of Dayton Police and Fire Departments when dialing 911.)

### Parking Services

Parking Services is responsible for management of the University's more than 5,500 parking spaces located in over 50 parking lots, and with enforcement of parking regulations. Lots are patrolled daily by Parking Services Representatives, who issue citations to violators. The following information applies to student parking.

- Campus parking facilities are extremely limited. We recommend you determine parking availability before bringing a vehicle to campus, as on street parking is also severely restricted in the vicinity of campus.
- All vehicles parked on University of Dayton property must have a valid parking permit displayed, except during open parking hours.
- First-Year residential students will NOT be permitted to bring vehicles to campus.
- Graduate/law students and graduate assistants will be sold student parking permits.
- Commuting students will be sold permits for Lot S1.
- Students living in landlord housing within one mile of campus will be sold resident student permits.
- Resident student parking priority will be given to upper class students with the highest priority being given to students with disabilities, internships, co-op or senior education majors.
- Information concerning permit sales will be disseminated to students annually.
- All students are required to apply online through the parking website (<http://www.udayton.edu/~safety/parking>).
- Evening students are sold N (night) permits, which are valid in Lot B at 4:15 p.m., Lots A, C, P, and S1 at 4:00 p.m. and anytime during weekends in any campus parking lot except those marked with a double letter. N (night) permits will be honored in Lot S1 anytime during the summer sessions.
- Students may contact Parking Services at (937) 229-2128, M-F 8:00 a.m.-4:30 p.m. or at [parking@udayton.edu](mailto:parking@udayton.edu) ([parking@notes.udayton.edu](mailto:parking@notes.udayton.edu)).

### Rescue Squad

The Department of Public Safety also provides around the clock emergency medical services, primarily through the support of the University of Dayton Student Volunteer Rescue Squad. The Student Volunteer Rescue Squad is comprised of full-time undergraduate students who receive their training and equipment from the Department of Public Safety. All UD Student Rescue Squad members are nationally registered EMT-Bs and volunteer their time to serve the community.

### Student Cadet Program

The Student Cadet Program consists of part-time student employees who operate the Student Escort Service through the Department of Public Safety. The Student Escort Service is a program that provides free transportation for students within the campus community with a focus on crime prevention.

## Student Handbook

Each student at the University of Dayton is responsible for knowing and observing the policies, regulations and procedures contained in the official student handbook. This publication also provides useful information on such subjects as University services, student organizations and resource numbers.

The entire Student Handbook is available here (<http://www.udayton.edu/studev>).

All Student Handbook information provided on the website may be printed from personal computers and printers.

The "University of Dayton Student Standards of Behavior" section of the the Student Handbook is printed in booklet form and distributed to all residents of UD owned housing facilities. The handbook is also available at the Kennedy Union Information Desk for students living in other residences.

Changes in disciplinary policies and procedures made during an academic year will be announced to the student population via campus e-mail. Informing students of policy and procedure changes via campus e-mail is considered official notification. The website version of the Student Handbook will be updated upon implementation of said change.

## Student Life and Kennedy Union

A variety of cultural, educational, social, and recreational activities are presented in the Union regularly to enrich and enhance academic life and foster a spirit of community. In addition, this office provides support, direction, and programming opportunities for students and officially recognized student organizations. Activities include theatrical productions, lectures, dance ensembles, and recitals and concerts by students and faculty members. Meeting rooms, a ballroom, Boll Theatre, and University vans are available for use and can be reserved by calling 229-3333 (Kennedy Union Room 241). Information about student organizations can also be found at 229-3333 (Kennedy Union Room 241).

The John F. Kennedy Memorial Union, centrally located on the campus, offers comfortable surroundings and a variety of services for the University community.

- Lounges provide space for discussion, studying, and socializing.
- The Hanger games room on the ground-floor includes:
  - Bowling lanes
  - Pool tables
  - Lounge space
  - A cafe
  - Video game
- The ground-floor food court includes:
  - A full-service deli
  - Pizza
  - Southwest cuisine
  - Daily specials
  - Grill favorites
  - Desserts
- The Union offers:

- Automatic teller machines
- Display cases
- Vending machines
- As are student offices for:
  - The Campus Activities Board
  - Christmas on Campus
  - Daytonian Yearbook
  - Flyer News
  - Flyer TV
  - Orpheus literary magazine
  - Student Government Association
  - A lounge for commuter students
- Information Center
- Box Office
- Leadership Development Office
- KU Dining Services
- Catering Services
- Travel agency

Student Life and Kennedy Union is responsible for:

- Registering all student organization-sponsored events
- Granting recognition to all student organizations
- Providing assistance for organization advisors
- Publicity approval
- Programming the Flyer TV information channel
- Coordinating campus-wide events

The office works directly with:

- Commuter students
- Flyer News
- Flyer Radio
- Daytonian
- Orpheus
- Campus Activities Board
- Christmas on Campus
- All recognized student organizations

## Women's Center

The Women's Center at the University of Dayton is an educational space which serves to enhance the climate for women and men on campus. Located on the second floor of Alumni Hall, the Center, which includes a Resource Center, gallery space and several reservable rooms, advances the full and active participation of women students, staff and faculty who learn and work at the University of Dayton, while promoting campus and community conversations on the role of women in society and the world. The Center accomplishes this mission by facilitating and coordinating programs and initiatives which: promote the physical and psychological well being of women through education, support services and referral; provide an ongoing assessment of the campus climate for women; promote the active and full participation of UD women through service, education, mentoring, networking and advocacy; inculcate leadership skills; address gender-related topics; provide information to the campus community on women's issues; provide a place to build a community of scholarship to advance research on women and gender;



create a welcoming and safe space for persons of different racial, social, gender, religious and cultural backgrounds; call women and men of all faiths to explore and incorporate faith-based living into their everyday lives. Connected, distinctive and community-building, the UD Women's Center strives to promote equality, understanding and mutual respect and to foster a strong educational community in which women and men are supported, challenged, and prepared to learn, lead and serve. For more information on the UD Women's Center, visit <http://womenscenter.udayton.edu> or call 937-229-5390.

## Admission-Undergraduate

We might not be able to make it easier for you to make your college decision, but at least we'll make it easier for you to apply. All it takes to apply is a simple click.

Applications for admission to the University of Dayton are reviewed for specific academic majors or, when applicable, for undeclared status in an academic division. The admission committee reviews grade record and pattern throughout high school, selection of courses in preparation for college, class standing or ranking (if provided by the high school) and ACT or SAT scores. The admission committee also considers the recommendation of a high school guidance counselor, along with other factors. The University of Dayton strives to admit students who possess the intellectual ability, the commitment to community and the motivation to thrive at the University of Dayton.

In this section:

- Application for Admission (p. 22)
- Advanced Standing by Examination (p. 22)
- Considerations for Admission (p. 23)
- High School Scholars (p. 24)
- International Students (p. 25)
- Programs for Select At-Risk Students (p. 25)
- Transfer Students (p. 25)
- Veterans (p. 25)

## Advanced Standing by Examination

### Advanced Placement (AP)

The University participates in the College Board's AP program, which allows students to receive college-level course credit for knowledge achieved through prior experience. AP examinations are given in May, upon completion of college-level material. Students who wish to receive credit and advanced placement through the AP program should have test scores sent to the University of Dayton. Advanced standing with credit in appropriate subject areas is awarded as follows:

- For a score of 5 - one or two terms of advanced standing with credit, depending on subject area
- For a score of 4 - one term of advanced standing with credit
- For a score of 3 - one term of advanced standing with credit is awarded in the following: computer science, environmental science, French, German, physics, psychology, Spanish, and statistics

Scores below 3 do not entitle the applicant to either credit or advanced standing.

### College Level Examination Program (CLEP)

The University of Dayton also participates in the College Level Examination Program (CLEP), sponsored by the College Board. CLEP offers examinations in specific subjects. Since not all subject examinations are acceptable and some subject examinations require an essay, please contact Testing Services at the University of Dayton at (937) 229-3277 for information.

### General Certificate of Education A-Level Examinations

GCE A-Level examinations are based on a British secondary school program of college-level work and standardized examinations. To receive credit submit official test results to the Office of the Dean. A-Level examinations with a grade of "E" or better will be considered for credit.

### International Baccalaureate

The IB Programme is a rigorous preuniversity course of studies leading to examinations. Each examined subject is graded on a scale of one (minimum) to seven (maximum). Diploma candidates are required to select one subject from each of the six available groups. At least three and not more than four subjects are taken at higher level while others are taken at standard level.

IB is administered through the Office of the Dean in the College of Arts and Sciences. Based on results of IB higher level examinations, students may receive transfer credit. Credit is not awarded for standard level examinations.

## Application for Admission

Applications for first-year admission should be submitted to the Office of Admission and Financial Aid through the University of Dayton's online application or the Common Application. The paper application has a \$50 application fee. This \$50 fee is waived if the electronic version of the Common Application or the University's application is submitted. Students are encouraged to submit applications early in their senior year of high school. The University of Dayton has an early action deadline of December 15 and a regular decision deadline of March 1.

Along with the application (including the essay), the applicant must submit an official transcript of courses and grades in secondary school, official results of the ACT or SAT and the counselor recommendation form.

Any person whose native language is not English must submit an acceptable score on:

- The Test of English as a Foreign Language (TOEFL)
- The English Language Proficiency Test (ELPT)
- The Advanced Placement International English Language (APIEL) Examination, or
- The International English Language Testing System (IELTS).

Exceptions to this policy may be made for students whose education has been in schools where English is the principal language of instruction.

Admission is based on the total information submitted by the applicant on his or her behalf. It is the applicant's responsibility to see that complete information has been provided to the Office of Admission and Financial Aid.

## Considerations for Admission

The applicant must have graduated from a high school accredited by a regional accrediting agency, a state department of education, or the equivalent and have a total record indicating a likelihood of success at the University of Dayton. The General Education Development (GED) certificate is also recognized for consideration by the admission committee.

The quality of the academic record is shown by the applicant's grades, selection of courses and class standing or ranking. Although no set pattern of courses is required for admission, a well-prepared candidate will have had from 15 to 18 units in English, social sciences, mathematics, foreign language and laboratory science. Those who plan to major in one of the natural sciences, mathematics, computer science, business administration or engineering will find a strong mathematics background helpful.

Additional indicators of academic aptitude are scores received on the ACT, SAT, and, when applicable, the Test of English as a Foreign Language (TOEFL). The recommendation of the high school guidance counselor concerning ability, motivation, and character is reviewed by the admission committee.

Each applicant is strongly encouraged to visit campus and talk with an admission counselor. A visit also will provide an opportunity to see campus and ask questions of students and faculty.

College Major	English	Foreign Language	Algebra I	Geometry	Algebra II - Trigonometry	Mathematics	Biology	Chemistry	Physics	Laboratory Science	Additional Academic Units
Business (all majors)	4	2	1	1	1	1				1	6
Engineering (all majors)	4	2	1	1	1	1		1	1		4
Engineering Technology (all majors)	4	2	1	1	1			1			6
Teacher Education	4	2	1	1	1		1			1	5
Dietetics	4	2	1	1	1	1	1	1			4
Exercise Science & Fitness Management	4	2	1	1	1	1	1	1	1	1	3
Exercise Science & Fitness Management	4	2	1	1	1	1	1	1	1		3
Exercise Science & Pre-Physical Therapy	4	2	1	1	1	1	1	1	1		3
Physical Education, Sport Management	4	2	1	1	1		1				6

American Studies, Art History, Communication, Criminal Justice Studies, Economics, English, Fine Arts, History, International Studies, Languages, Music, Music Therapy, Philosophy, Photography, Political Science, Psychology, Religious Studies, Sociology, Theatre, Visual Communication Design, Undeclared	4	2	1	1	1					1	6
Biochemistry4 Biology, Chemistry, Environment Biology, Premedicine Predenistry	4	2	1	1	1	1	1	1	1	1	3
Applied Mathematical Economics, Computer Science, Mathematics, Physical Science, Physics, Physics- Computer Science	4	2	1	1	1	1		1	1		4
Computer Information Systems	4	2	1	1	1	1		1	1		4
Geology, Environmental Geology	4	2	1	1	1	1		1			5

## High School Scholars

The University of Dayton participates in the program established by Ohio Senate Bill 140, which allows high school juniors and seniors to enroll in college courses while still enrolled in high school, provided

space is available. This program is also known as the Post-Secondary Enrollment Options program. It is selective and limited to a specific number of students. Interested students must submit a High School Scholars Program application, available in the Office of Admission or in Dayton-area high school guidance offices in the Dayton area. A PDF

version of the application is also available on the admission website ([catalog.udayton.edu/undergraduate/generalinformation/admission/highschoolscholars/%20http://www.udayton.edu/apply/pseo.php](http://catalog.udayton.edu/undergraduate/generalinformation/admission/highschoolscholars/%20http://www.udayton.edu/apply/pseo.php)).

## International Students

### Academic Programs

International students applying for an undergraduate program should submit the online Application for Undergraduate Admission and Scholarship or the Common Application and follow the general admission procedure outlined in the application instructions. The paper application has a \$50 application fee. This \$50 fee is waived if the electronic version of the Common Application or the University's application is submitted. The applicant whose native language is not English must demonstrate:

- A score of 523 (paper-based) or 70 (Internet-based) on the Test of English as a Foreign Language (TOEFL),
- A minimum score of 956 on the English Language Proficiency Test (ELPT),
- A minimum score of three (3) on the Advanced Placement International English Language (APIEL) Examination, or
- A minimum Band 6 score on the International English Language Testing System (IELTS) may be submitted in lieu of the TOEFL.

Undergraduate applicants unable to demonstrate the required TOEFL score or the equivalent for their level of study at the time of application may be considered for conditional admission. Such a student will be expected to attend the University of Dayton's Intensive English Program and successfully complete the program or obtain the required TOEFL score for their level of study before full admission to an academic program will be granted.

For all students applying to an academic program, an official copy of the student's complete academic record of all previously attended secondary schools, colleges or universities must be received. This record must include dates of attendance, all subjects studied, grades earned and marks achieved on examinations. These documents must be accompanied by a certified English translation if the documents are not in English. Documents must be sent directly from the institution to the University.

### Intensive English Program

Students wishing to study English as a second language may enroll in the University's Intensive English Program. Students may apply for admission to the Intensive English Program only or they may apply for conditional admission to an academic program at the University of Dayton. If a student seeking conditional admission completes an application to an academic program, a separate application for the Intensive English Program is not required.

Applicants to any of the above University programs requiring a student visa must present a letter of financial support and an original bank statement showing sufficient funds to cover the first year of study.

## Programs for Select At-Risk Students

The University has planned academic support programs, subject to availability, for a limited number of students who are judged to need special support to be successful at the University of Dayton.

The Fully Integrated Resource, Support and Transition (FIRST) Program is offered to a limited number of students whose academic profile and experience suggest that they will benefit from a structured transition to college. In accepting admission to the University, FIRST students and their parents sign a contract indicating their understanding of the expectations for participants in the program. FIRST students are enrolled in a course during the fall semester, which is designed to engage students in discussion and activities that will enhance their learning and study skills. In addition, FIRST students are expected to attend learning support sessions offered for several courses during the first semester.

The University Special Admits Program serves entering first-year students who are capable of academic success but, due to deficiencies in their academic background, need additional support to realize their full potential. Each year the Office of Admission and Financial Aid, in collaboration with each academic division (College of Arts and Sciences, Schools of Business Administration, Education and Health Sciences, and Engineering), sets guidelines for accepting a limited number of first-year undergraduates as Special Admit students. Each academic division has developed support programs to help Special Admit students succeed in college. Depending on the academic division, the Special Admits Program may include careful course placement, special advising, supplemental instruction in designated courses, study tables, math workshops, and cohort formation. Contact the Office of Admission and Financial Aid for specific information about the Special Admits Program in each academic division.

## Transfer Students

Students from accredited institutions may be considered for transfer to the University of Dayton provided they are in good standing socially and academically (minimum of a C average-2.0 cumulative grade point average). Possession of the minimum grade point average for consideration does not imply admissibility to the University. Most areas of study prefer a 2.5 or higher grade point average for admission.

Transfer students will be considered for admission after they have followed the regular admission procedure. Applicants for transfer admission may submit the University of Dayton's online application or the Common Application. ACT or SAT scores are required of transfer applicants under 21 years of age. All transfer candidates must submit official transcripts from all institutions previously attended. The dean's office of the appropriate college or school will evaluate the transcript(s) to determine the number of transferable credits. In general, all college credits earned with a "C" (2.0 on a 4.0 scale) or higher from any regionally accredited college or university will transfer and be included on the University of Dayton transcript. No credit will be given for a course in which the student earned below a "C". The evaluation to determine which courses will be accepted toward the degree will also be completed by the dean's office of the appropriate college or school.

A student with transfer credit from a two-year institution will be required to have at least 54 semester hours from a four-year institution for any baccalaureate degree. A transfer student is considered for a degree only if the last 30 semester hours have been taken from the University of Dayton and other requirements for graduation have been met.

## Veteran Services Office

All departments at the University of Dayton have been approved by the State Approving Agency for Veterans' Training. Please contact the Flyers First Office of Veterans Services to inquire as to whether your

major is listed among those approved by the State Approving Agency. The Flyers First Office of Veteran Services is located in St. Mary's Hall, room 411, and will assist in processing the necessary forms for educational benefits. A student who is receiving V.A. benefits is required to complete and sign all required forms, which can be obtained online. (<http://www.udayton.edu/flyersfirst/veterans/#2>) Students using veteran benefits must inform the Veteran Services Office of any changes made to major, enrollment and registration. Failure to follow this procedure may result in cancellation of benefits by the Department of Veterans Affairs. For the conditions for good academic standing, visit Academic Standing under the Academic Information in the General Information section of the Catalog. If a student on probation fails to acquire the required cumulative grade point average at the end of the next full-time term, the benefits from the V.A. may cease.

## Financial Information-Undergraduate

A University of Dayton education is a lifetime investment, appreciating over the course of time. It's also an excellent value, and more than 90 percent of undergraduates receive financial assistance. Find out how more than 7,300 undergrads are making their UD dream a reality.

In this section:

- Academic Scholarships for First Year Students (p. 26)
- Academic Scholarships for Returning Students (p. 26)
- Additional Opportunities (p. 26)
- Cancellation and Refunds (p. 27)
- Dining Services (p. 27)
- Employment (p. 27)
- Expenses (p. 28)
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- Grants (p. 28)
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- Other Scholarship Opportunities (p. 29)
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- Residence Life Policy (p. 29)
- Room and Board Per Term, Terms 1 and 2 (p. 30)
- Tuition Reductions (p. 30)
- Undergraduate Tuition and Charges (p. 30)
- Veterans ([catalog.udayton.edu/undergraduate/generalinformation/financialinformation/veterans](http://catalog.udayton.edu/undergraduate/generalinformation/financialinformation/veterans))

## Academic Scholarships for First-Year Students

Merit based scholarships have been established to recognize academic achievement for our incoming first-year students. Applicants receive consideration for these scholarships based on the following:

- high school academic performance
- SAT or ACT scores
- demonstrated service to school, community and church
- proven leadership ability

- citizenship

Awards begin at \$1,000, and each scholarship is renewable for eight undergraduate terms. To remain eligible for these scholarships, recipients must maintain the required minimum cumulative grade point average, be enrolled full time (minimum of 12 credit hours), participate in University-sponsored extracurricular activities and serve as a responsible member of the university community.

### Application Procedure

1. Apply for admission to the University of Dayton by December 15th of your senior year in high school. Apply online at the University homepage.
2. Take the Scholastic Aptitude Test (SAT) and/or the American College Test (ACT) no later than December. Indicate that your scores are to be sent to the University of Dayton.

## Academic Scholarships for Returning Students

Students in full-time attendance who have completed at least 12 semester hours on campus at the University of Dayton will be considered for additional scholarships. Recipients are selected on the basis of academic accomplishments, leadership, financial need and demonstrated service to the University. These scholarships are gifts to the University of Dayton, from alumni, families, corporations and foundations. The scholarships are awarded for a period of one academic year and generally range from \$500 to \$3,000.

## Additional Opportunities

### Veteran Benefits

Students who enlisted in the military as Active Duty or as Selected Reserve Status may qualify for the Montgomery G.I. Bill benefits. Students of a parent who is/was a military veteran may qualify for Educational Assistance Benefits. For additional information, visit [www.gibill.va.gov](http://www.gibill.va.gov) (<http://www.gibill.va.gov>).

### Vocational Rehabilitation

State vocational rehabilitation agencies arrange the training of disabled persons for gainful employment. Requests for information on rehabilitation services should be directed to the State Director, Vocational Rehabilitation Agency.

### U.S. Army Reserve Officers Training Corps (ROTC)

Army ROTC has a number of scholarships available, affording students the opportunity to defray a majority of the costs of attending a prestigious school such as the University of Dayton. High school students compete for three- and four-year scholarships. These scholarships currently are valued at full-tuition, plus University incentive grants. Two- and three-year scholarships may be available once a student is enrolled at the University. Currently, these scholarships will pay tuition. In addition, students receive an allowance of \$3,000 to \$5,000 each school year the scholarship is in effect.

### U.S. Air Force Reserve Officers Training Corps (AFROTC)

The Air Force Reserve Officers Training Corps (AFROTC) program is offered in cooperation with Wright State University by the Department of Aerospace Studies. All students who complete the General Military



Course (first and sophomore years) may have the opportunity to enroll in the advanced Professional Military Course (junior and senior years), leading to a commission in the United States Air Force upon graduation. There are opportunities throughout the program to compete for scholarships and stipend money. Refer to the Air Force Reserve Officers Training Corps (AFROTC).

### Ohio Safety Officers Memorial Fund

- NOT based on financial need
- Available to children of Ohio Peace Officers or Ohio Firefighters killed in the line of duty
- Apply by contacting the Ohio Board of Regents

## Cancellation and Refunds

If registration is cancelled before the first day of classes, full tuition refunds will be made with the exception of the admission deposit. Housing refunds will be made in accordance with the terms of the "Student Housing Contract".

Cancellations will be allowed only after the completion of proper drop/add procedures. Students who do not attend classes and do not officially complete withdrawal procedures during the cancellation period will be responsible for the full amount of the applicable tuition and charges.

Detailed housing cancellation information can be found at the Residential Services website at [housing.udayton.edu](http://housing.udayton.edu).

During the four-week cancellation period for the first and second terms, tuition credits will be given according to the following schedule:

- During first week of classes 80%
- During second week of classes 60%
- During third week of classes 40%
- During fourth week of classes 25%
- During or after fifth week of classes 0%

(The 1st week starts on the first day of a term; the 2nd week begins 7 days later, etc.)

During the two-week cancellation period for each six-week session of the split third term, tuition credits will be given according to the following schedule:

- During first week of classes 65%
- During second week of classes 30%
- During or after third week of classes 0%

Cancellations for a full third term course have a four-week cancellation period and will be on the same schedule as cancellations for the first and second terms.

Financial adjustments for tuition are based on the date the drop (withdrawal) form is finalized in registration.

Financial adjustments for housing (please refer to your housing contract) are based on the date of checkout from housing, if applicable.

Special rules may apply for students who withdraw and who received Title IV funds. Please contact the Office of Financial Aid if additional information is needed.

All tuition refund requests and appeals must be in writing and directed to Beth Gloekler, Director of Student Accounts.

Students suspended/dismissed from the University or from University residence facilities as a result of disciplinary action are not eligible for any refund of tuition, room or board charges under the University's Cancellation and Refund policy. Exceptions to this position will be made to comply with refund requirements of federal financial aid programs.

## Dining Services

The University of Dayton Dining Services operates two full-service a la carte student dining facilities located in Kennedy Union and Marycrest Complex, and two restaurants, Passports and The Grainary, located in the V.W. Kettering Residence Hall. The Emporium, a mini grocery store with a full service deli, is located in the Marianist Residence Hall, and Stuart's Landing, a convenience store, is located in Stuart Hall Complex. Dining Services also operates The Galley, a pretzel/ ice cream/ gourmet coffee shop located in Kennedy Union, and The Chill, a juice bar with healthy snack options, located in The RecPlex. All students living in Marycrest, Stuart, Founders, Marianist and Virginia Kettering Residence Halls are required to purchase a meal plan. Meal plan options are as follows:

- **Standard Plan** – This structured meal plan has a spending allowance associated with it during specific meal periods. If you don't spend the entire allowance for that meal, you lose it. This plan starts with breakfast the first day of classes.

**Note:** Only one block of funds may be used during each meal period. For example, two blocks may not be used during the lunch meal period on the same day.

- **The Flexible Plan**- This is a debit style meal plan and provides complete flexibility, with no specific meal periods and no spending allowances.

**Note:** There are no refunds on debit plan balances however, 100% of balances remaining at the end of fall semester will roll over to the spring semester. At the end of spring semester 50% up to a maximum of \$300 will roll over to the next school year. Plan participation charge applies.

All students living in residence halls must have one of the following:

- **Standard Plan** (3 blocks per day, 7 days) \$2,370.00/ semester
- **Flexible Plan** (debit account) \$2,370.00/ semester

For complete information on meal plans, please visit <http://dining.udayton.edu>

When a student does not choose a meal plan the default plan is the Flexible Plan.

Non-resident students may purchase a Neighborhood meal plan (debit account).

## Employment

The Federal Work-Study Program (Federally supported) provides work opportunities for full-time students who demonstrate financial need. While most work opportunities are on campus, employment is also available in local agencies and area elementary schools through the Federal Work Study Community Service Program.

University-Funded Employment (University supported) opportunities for students who do not qualify for the Federal Work-Study Program are also available.

Federal Work-Study and University-Funded student workers may work up to 20 hours per week during the school term and will receive payroll checks semi-monthly for their services. Students interested in pursuing opportunities in either of these programs should apply online at [jobs.udayton.edu](http://jobs.udayton.edu).

## Expenses

Tuition for full-time students during the 2014-15 academic year (fall and spring terms) will total about \$37,230. Room and board on campus for this period would be approximately \$12,340 based on double room occupancy, Flexible Meal Plan, and a Flyer Express account for weekends. Books and supplies will cost approximately \$500.00 each term. In addition, the student will need funds to satisfy personal expenses and extra meals on the weekends.

Expenses for commuting students will include tuition and miscellaneous living costs. Transportation to and from the University as well as meals should be considered in the budget.

## Financial Aid Policy

The University of Dayton realizes that many students need assistance financing their college education. Financial aid is available in the form of nonrepayable grants, scholarships, student loans and part-time employment. Parent loans and monthly payment plans are also available. Priority is given to our full-time, degree-seeking students.

Students seeking financial assistance must complete the Free Application for Federal Student Aid (FAFSA) annually. Developed by the U.S. Department of Education, the FAFSA is used to determine the family's financial need after careful review of income, assets and other household information. Eligibility for need-based federal, state and university-sponsored aid is determined by comparing the total cost of attending UD with a family's available resources - as determined by the FAFSA.

The FAFSA should be submitted electronically each year ([www.fafsa.gov](http://www.fafsa.gov)) by March 1 to ensure that the University of Dayton receives the results by the priority deadline date of May 1. UD's federal code is 003127.

In order to submit the FAFSA electronically, the applicant (student) and at least one parent (if deemed dependent a dependent student by FAFSA definition) must possess a federal student aid PIN number. To apply for an FSA PIN, the appropriate parties should visit [www.pin.ed.gov](http://www.pin.ed.gov). Students are encouraged to call the Flyers First Office or Financial Aid or meet with a Flyers First Counselor if they have questions regarding financial aid.

## General Policy

The tuition and charges of the University are set at the minimum permissible for financially responsible operation, and, in general, these charges are less than the actual costs incurred. Gifts and grants received through the generosity of industry, friends and alumni help to bridge the difference between income and costs. The trustees of the University reserve the right to change the regulations concerning the adjustment of tuition and charges at any time the need arises and to make whatever changes in the curricula they may deem advisable.

Tuition, charges, room and board are to be paid in full before the term begins or in accordance with payment terms for the fall and spring semesters. Late registration charges are assessed when scheduling and registration are completed after the start of the term.

All checks should be made payable to the UNIVERSITY OF DAYTON. The student's name and student identification number should be shown on the face of each check to insure proper credit.

An assessment of \$25.00 + 1% of the check amount will be made for payment of tuition and charges by a bad check or for any other returned check from any area at the University. This assessment is made each time a check is dishonored.

Registration for a new term, transcripts of credit, and honors of graduation may be permitted only for students whose financial University records are clear.

## Grants

### Federal Pell Grant

The Pell Grant Program makes funds available to eligible undergraduate students who demonstrate high financial need. Apply by completing the Free Application for Federal Student Aid (FAFSA).

### Federal Supplemental Educational Opportunity Grants

These federally supported, university-administered grants are provided to undergraduate students who have high financial need.

### University Need Based Grant

The University of Dayton offers nonrepayable grants to undergraduate students with demonstrated financial need. The University assumes that the student will also accept self-help aid in the form of loans and school-year employment. A University Need Based Grant is intended to cover a portion of financial need. The Free Application for Federal Student Aid (FAFSA) is required annually for consideration.

### Federal TEACH Grant

The Teacher Education Assistance for College and Higher Education (TEACH) Grant Program provides up to \$4,000 per year in grants for graduate and undergraduate students in specified majors who intend to teach full-time in high-need subject areas for at least four years at schools classified as serving low-income students. For more information, please call or visit the Office of Financial Aid.

## Loans

### Federal Perkins Loans

The Federal Perkins Loan is a federally-funded student loan, but individual schools determine eligibility requirements. Priority is given to dependent undergraduate students who demonstrate high financial need (as determined by the Free Application for Federal Student-Aid). Repayment begins nine (9) months after the student graduates, leaves school or drops below half-time enrollment status.

### Federal Direct Loans

Federal Direct Loans are made available to all students who file the Free Application for Federal Student Aid (FAFSA). The maximum loan is \$5,500 per year for the first year, \$6,500 for the second year and \$7,500 per year for the junior and senior years. Repayment begins six (6) months after the student graduates, leaves school or drops below half-time enrollment status. Repayment can be spread over a ten-year period.



Based on the FAFSA, the student will qualify for an Unsubsidized Direct loan, Subsidized Direct loan, or a combination of both.

### Federal Parent Loan for Undergraduate Students

The Federal Parent Loan for Undergraduate Students (PLUS) provides a source of financing to all families regardless of the family income. All credit-worthy parents of dependent undergraduate students may borrow up to the cost of education minus financial aid per academic year for each student attending an accredited college. Standard repayment begins within sixty days after the loan is fully disbursed, however, parents have the option to defer payments until their dependent student graduates. Repayment can be spread over a ten-year period.

### Private Alternative Educational Loans

Private Alternative Educational Loans are also available to help meet college expenses. The University of Dayton works closely with several lenders and their private loan programs, however, students are able to borrow from the lender of their choice. These private loan programs offer competitive interest rates, flexible repayment schedules and various co-signer requirements. If you are interested in a private alternative educational loan, please contact the Office of Financial Aid or visit our website (<http://www.finaid.udayton.edu/alternative>).

## Other Scholarship Opportunities

### Athletic Scholarships

Intercollegiate athletic scholarships are awarded each year to entering students. Contact the Department of Intercollegiate Athletics at (937) 229-2100 for additional information.

### Music Scholarships

Music scholarships are awarded on a competitive basis following auditions with the music faculty. Contact the Department of Music at (937) 229-3936 for additional information.

### Ohio National Guard Scholarship

- NOT based on financial need
- Available to Ohio residents enlisted in the Ohio National Guard
- Apply by contacting your local National Guard recruiter or call 1-888-400-6484

### Ohio War Orphans Scholarship

- Available to children of deceased/disabled Ohio war veterans
- Apply by contacting the Ohio Board or Regents
- Deadline July 1

### Visual Arts Scholarships

Visual Arts Scholarships are awarded on a competitive basis. Entering students must submit a portfolio for consideration. A number of four-year scholarships are awarded to students who demonstrate outstanding promise in the visual arts and who plan to pursue a degree in this field. Contact the Department of Visual Arts at (937) 229-3237 for additional information.

### Additional Scholarships Administered by the University of Dayton

The University will select students as nominees for scholarships offered by certain corporations, foundations, service organizations, alumni, families and other benefactors.

## Payment Options

For those who prefer to budget annual school costs out of monthly income, the following options are available:

**Credit Cards** - Effective July 1, 2014, credit card payments for student account charges may be made online only. MasterCard, Visa, American Express, and Discover are accepted. A convenience charge will apply.

**UD Payment Plan** - The University of Dayton understands that sometimes you need some help managing your statement of account. That's why we offer The University of Dayton Payment Plan. The plan is a convenient, manageable payment solution that gives you the option to pay interest-free monthly installments. The plan is available for Undergraduate and Graduate students who are in good financial standing with the University. Students or their authorized user may enroll in the plan online. Features of the plan include:

- Four payments per semester (fall and spring)
- Enrollment charge of just \$50 per semester with no interest charges
- Payments begin July 22 for fall term and December 22 for spring term
- You can enroll in the plan, manage your account and make payments online 24 hours a day
- Paperless billing

For more information or to enroll, please visit [www.udayton.edu/studentaccounts](http://www.udayton.edu/studentaccounts). Our customer service representatives are available to assist you with questions at 1-800-229-7117

**Sponsored Students** - It is the responsibility of the student to provide their letter of financial guarantee to the Office of Student Accounts prior to the start of the term and make payment for any amount not covered by the sponsor.

Student accounts that are not paid in full prior to the start of the semester or enrolled in the UD Payment Plan are subject to a 1% interest charge on the unpaid balance each month.

The University of Dayton reserves the right to make changes to payment options at any time.

## Residence Life Policy

Each first- and second-year student (classified by a student's high school graduation year, not by the number of credit hours) under 21 years of age, unmarried and not living at parent's/legal guardian's permanent residence within 40 miles of the University of Dayton is required to live in University housing. A completed notarized statement is required from first- and second-year students requesting to commute from a parent's/legal guardian's permanent residence.

Each student applying for a University residence facility must complete an online residential living contract with Housing and Residence Life. The contract covers both the fall and spring terms of the academic year. Once a contract is signed, it may not be canceled without incurring substantial cost as long as the student is enrolled at the University.

Those students dropping all courses and checking out of housing during the first four weeks of school will be authorized refunds as stated under "Cancellations and Cancellation Charge".

All students living in housing facilities are required to observe all University regulations and specific regulations of each facility. Residents

will be held responsible for any damages to the residential structure that are due to their own negligence, and will be billed for those damages at the time of discovery. Students will share responsibility with other residents of the structure for unidentified common area damages. Common area damage charges will be billed monthly when applicable. The same conditions shall also hold for any loss or damage to the University grounds, fixtures, furnishings, or other property provided by the University for use by the students.

Students may reside in their rooms, suites, apartments or houses without additional charge during Thanksgiving and Easter recesses. All University residences are closed during Semester and Spring breaks.

## Room and Board, per term, Terms I and II August 2014 through May 2015

### Choices for First-Year Students

Founders Hall \$3550.00  
 Marianist Complex \$3550.00  
 Marycrest Complex \$3550.00  
 Stuart Complex \$3550.00  
 Single Rooms in these residence halls \$4150.00

### Choices for Second Year Students

Irving Commons Apartments \$3550.00  
 Virginia W. Kettering Suite Complex \$3550.00  
 Campus South Apartments \$3550.00  
 East Stewart Garden Apartments \$3550.00  
 South Quad Garden Apartments \$3550.00  
 819 Irving Avenue Apartments \$3550.00

### Choices for Junior/Senior Students

Lawnview Apartments \$4150.00  
 ArtStreet Apartments \$4150.00  
 Caldwell Apartments \$4150.00  
 Irving Commons Apartments \$3550.00  
 1132 Irving Avenue Apartments \$4150.00  
 1806 Brown Street Apartments \$4150.00  
 Traditional Houses in the Student Neighborhoods \$4150.00  
 New/Renovated/Sorority Houses in the Student Neighborhoods \$4325.00

### Choices for Graduate/Law School Students

Plumwood Studio Apartments \$4000.00  
 Plumwood Single Apartments \$4250.00  
 University Place Studio/Double Apartments \$4750.00  
 University Place Single Apartments \$5100.00

## Tuition Reductions

### Tuition Remission/ Assistance for University of Dayton Full-time employees

Full-time benefit-eligible employees, spouses, and children, when admitted in accordance with University of Dayton admission standards, are eligible for tuition remission/assistance benefits. Eligible employees receive 100% remission for both graduate and undergraduate classes

for themselves up to 18 credit hours per academic year, not to exceed 6 credit hours in each of the first and second semesters.

Spouses and children are eligible for undergraduate tuition assistance only based on years of benefit-eligible service. Please refer to the appropriate University of Dayton Benefit Handbook for the schedule of dependent tuition assistance.

### Senior Fellows

Students 60 years of age and over are eligible to apply through the College of Arts and Sciences at the University of Dayton for remission of tuition.

## Undergraduate Tuition and Charges

### Tuition Charges in Terms I and II

Full-time undergraduate student (12-18 semester hours), per term \$18,615  
 3/4-time undergraduate student (8-11 semester hours), per term \$13,961  
 Part-time undergraduate student (1-7 semester hours), per semester hour \$1,241  
 Audit course, per undergraduate semester hour \$621

### Tuition Charges in Term III

Tuition per semester hour \$1,241

### Other Charges

Late registration service charge 25.00 per week to a maximum of \$75.00  
 Credit by examination, per semester hour \$35.00  
 CLEP per credit hour \$35.00  
 Books and supplies variable

### Full-time and 3/4-time Students

A student with an academic schedule of at least 12 semester hours is considered a full-time student. A student with an academic schedule of 8-11 semester hours is considered a 3/4-time student. With this status and upon payment of tuition, the student is entitled to the benefits of the various activities and student services as available.

### Part-time Students

A student with an academic schedule of fewer than 8 semester hours is considered a part-time student.

### Special Students

Special students and non-matriculated students (continuing education) are subject to the various expenses outlined above for full-time, 3/4-time, or part-time students.

## Academic Information-Undergraduate

In this section:

- Academic Honor Code (p. 42)
- Academic Standing (p. 31)
- Awards (p. 31)
- Class Attendance Policy (p. 37)
- Class Standing (p. 37)

- Dean's List (p. 37)
- English Composition Placement ([catalog.udayton.edu/undergraduate/generalinformation/academicinformation/englishcompositionplacement](http://catalog.udayton.edu/undergraduate/generalinformation/academicinformation/englishcompositionplacement))
- Final Exam Policy (p. 38)
- First-Year Experience Program (p. 38)
- General Requirements (p. 38)
- Grade Appeals (p. 39)
- Grades and Scholarship (p. 39)
- Graduation (p. 37)
- Honors (p. 40)
- Non-Disability Related Course Waiver Policy (p. 41)
- Student Records (p. 41)
- Transcripts (p. 44)
- Transfer Policies (p. 41)
- Undergraduate Students in Graduate Courses (p. 44)

## Academic Standing

The student's academic standing is determined by the cumulative grade-point average at the end of each term.

1. To be in good academic standing, a student must have a cumulative grade-point average of (a) at least 1.7 at the end of the first and second terms, (b) at least 1.8 at the end of the third term, (c) at least 1.9 at the end of the fourth term, and (d) at least 2.0 at the end of the fifth and succeeding terms. For part-time and transfer students, a block of 12 semester hours of credit is considered one term. A cumulative grade-point average of at least 2.0 is required for graduation.
2. A cumulative grade-point average below the one required will place the student on academic probation. The student's academic dean will notify the student of his or her probationary status. A student on probation must follow a restricted academic program not to exceed 15 semester hours.
3. It is the responsibility of any student on academic probation to complete a contract with the dean for the purpose of determining the nature and limitations of the student's future academic and extracurricular activities.
4. Students whose academic performance has seriously impaired their ability to succeed academically at the University of Dayton are subject to dismissal. A student who is subject to academic dismissal can be dismissed only by his or her academic dean, who authorizes the dismissal and notifies the student of his or her status. Students who are subject to dismissal include (a) those who fail to achieve good standing at the end of a term on probation and (b) those who have a term point average of less than 1.0, regardless of cumulative grade-point average.
5. The Registrar will post "Academic Dismissal" on the permanent record of any student who is dismissed.

## Awards

Special awards for exceptional scholastic achievement are given annually through the generosity of donors. To be eligible for any of these awards, a student must have a cumulative grade point average of at least 3.0. The awards:

Accounting - Award of Excellence to the Outstanding Senior in Accounting - donated by Jerome E. Westendorf '43 and Warren A. Kappeler '41.

Accounting - Award of Merit in Recognition of Outstanding Achievement - donated by The Ohio Society of Certified Public Accountants, Dayton Chapter.

Accounting - Accounting Career Award to a Student Exhibiting Great Potential in the Accounting Profession - donated by the Institute of Management Accountants, Dayton Chapter.

Accounting - The Clark-Eley-Fioriti Award for Outstanding Service to the Department of Accounting - donated by the alumni and faculty of the Department of Accounting.

Anthropology - The Margaret Mary Emonds Huth Memorial Award of Excellence to the Outstanding Senior in Anthropology - donated by Dr. Edward A. Huth.

Arts and Sciences - International Learn, Lead and Serve Award - donated in honor of Steven C. Buck, 2003.

Arts and Sciences - The Dean Leonard A. Mann, S.M., Award of Excellence to the Outstanding Senior in the College of Arts and Sciences - donated by Joseph Zusman '65.

Athletics - The Reverend Charles L. Collins, S.M., Award of Excellence to an Athlete for Outstanding Citizenship - donated by Joseph Zusman '65.

Athletics - The Charles R. Kendall '29 Memorial Award of Excellence for Achievement in Academic and Athletic Effort - donated by Mrs. Charles R. Kendall and friends.

Athletics - The John L. Macbeth Memorial Award to the Outstanding Scholar-Athlete in Football and Basketball. The recipient must have completed five or more terms and won a varsity letter.

Athletics - The Ann E. Meyers Award of Excellence for Achievement in Academic and Athletic Effort in Women's Basketball and Volleyball.

Biology - The P.K. Bajpai Undergraduate Research Award to the Undergraduate Student Who Best Represents the Spirit of Undergraduate Research in Biology.

Biology - The John J. Comer Biomedical Undergraduate Research Award to the Undergraduate Student Who Best Demonstrated Research Excellence in Biomedical Science as a Biology Major.

Biology - The John J. Comer Ecological Undergraduate Research Award to the Undergraduate Student Who Best Demonstrated Research Excellence in Ecology as a Biology Major.

Biology - The John E. Dlugos Jr. Memorial Award of Excellence to the Outstanding Senior Majoring in Biology - donated by Mr. and Mrs. John E. Dlugos.

Biology - The Brother Russell A. Joly, S.M., Award of Excellence to the Student Who Best Combines Excellence in Biology and Genuine Appreciation of Nature.

Biology - Learn, Lead and Serve Undergraduate Award of Excellence to the Biology Undergraduate Student Who Completed an Outstanding Experiential Learning Project, which included both Leadership and Service.

Business Administration - Business and Marianist Values Integrated Learning and Living Community Award - to a senior who has made significant contributions to the success of the ILLC.

Business Administration - The Dick Flaute Award for Exceptional Service, Recognizing Exemplary Service by a Graduating Student in a Flyer Enterprises Activity.

Business Administration - The Sam Gould Award for Leadership Excellence, Recognizing Outstanding Leadership by a Graduating Senior in a Flyer Enterprises Management Position.

Business Administration - Outstanding Peer Adviser Award.

Business Administration - The Miriam Rosenthal Award of Excellence to a Graduating Senior in the School of Business Administration - donated by Dean William J. Hoben.

Business Administration - The Mark T. Schneider Award to a Senior in the School of Business Administration Who Has Combined Academic Excellence with Service to the University and the Community - donated by family and friends in his memory.

Campus Ministry - The Nancy Bramlage Award, presented by Campus Ministry's Center for Social Concern, to Deserving Students or Student Groups that have most Effectively used Nonviolent Direct Action to Work for Change.

Campus Ministry - Marianist Award for Voluntary Service to a Graduating Senior Who Has Earned Distinction through Voluntary Service to the Community - donated by the Marianists of the University of Dayton.

Campus Ministry - The Brother Wottle Campus Ministry Award: "An Award of Appreciation for Service to Campus Ministry."

Chemical and Materials Engineering - The Victor Emanuel '15 Award of Excellence to the Outstanding Senior in Chemical Engineering - sponsored by the University of Dayton Alumni Association since 1962.

Chemical and Materials Engineering - The Raymond L. Fitz Sr. Memorial Award of Excellence to the Outstanding Sophomore in Chemical Engineering.

Chemical and Materials Engineering - The Edmund J. Rolinski Memorial Award of Excellence to the Outstanding Senior in Leadership and Service.

Chemical and Materials Engineering - The Robert G. Schenck Memorial Award of Excellence to the Outstanding Junior in Chemical Engineering - donated by Stanley L. Lopata.

Chemistry - American Chemical Society Analytical Award.

Chemistry - American Chemical Society Award: Patterson College Chemistry Award.

Chemistry - American Chemical Society, Division of Organic Chemistry Award to a Senior Student.

Chemistry - American Institute of Chemists Award.

Chemistry - CRC PRESS Freshman Chemistry Achievement Award to a Deserving First-Year Student Majoring in Chemistry.

Chemistry - The Brother George J. Geisler, S.M., Award of Excellence to the Outstanding Student in Chemistry - donated by Joseph Poelking '32.

Chemistry - The Arlo D. Harris Assistance Fund to a Deserving Student Majoring in Chemistry.

Chemistry - The Bernard J. Katchman Memorial Scholarship/Carl I. Michaelis Scholarship Award to an Entering First-Year Student Majoring in Chemistry.

Chemistry - The Brother John J. Lucier, S.M., Award of Excellence to the Outstanding Junior Majoring in Chemistry - donated by a friend.

Chemistry - Magotti Award for Summer Research.

Chemistry - The Carl I. Michaelis Scholarship Award to a Deserving Junior or Senior Majoring in Chemistry.

Chemistry - The Charles Pedersen Award for Summer Research.

Chemistry - Polymer Education Committee Award for Outstanding Performance in Organic Chemistry.

Chemistry - The Philip Zaidain Memorial Award to a Deserving Student Majoring in Chemistry.

Civil and Environmental Engineering and Engineering Mechanics - The George A. Barrett '28 Award of Excellence to the Outstanding Junior in Civil Engineering - donated by family and friends in his memory.

Civil and Environmental Engineering and Engineering Mechanics - The Harry F. Finke, 1902, Award of Excellence to the Outstanding Senior in Civil Engineering - sponsored by the University of Dayton Alumni Association since 1962.

Communication - The Joan M. Broskey Memorial Award for Outstanding Academic and Professional Achievements in Public Relations.

Communication - Faculty Award for Academic Excellence to the Senior with the Highest Cumulative and Major Grade Point Averages - donated by the faculty of the Department of Communication.

Communication - The Bette Rogge Morse Award to the Outstanding Senior Woman in Communication.

Communication - The Dr. Florence I. Wolff Achievement Award for Outstanding Contributions in Academic, Extracurricular and Community Service Activities.

Communication-Broadcasting - The Omar Williams Award of Excellence to the Outstanding Student in Broadcasting - donated by the University of Dayton.

Communication-Debating - The Mary Elizabeth Jones Memorial Award of Excellence to an Outstanding Debater - donated by Dr. D. G. Reilly.

Communication-Journalism - The Ritter Collett Award of Excellence to the Outstanding Senior in Journalism. Awarded annually to the student who best demonstrates in his/her person and writings the qualities of Mr. Collett that the University hopes will serve as an inspiration to the journalism students.

Communication-Journalism - The Brother George F. Kohles, S.M., Award of Excellence in Journalism - donated by a friend.

Communication-Mass Media Arts - The Si Burick Award of Excellence for Outstanding Academic and Cocurricular Achievement in Mass Media Arts - donated by the University of Dayton.



Communication-Public Relations - The PRSA Maureen M. Pater Award of Distinction to the Outstanding Senior in Public Relations - donated by the Dayton-Miami Valley Chapter of the Public Relations Society of America.

Communication-Speech Arts - The Reverend Vincent R. Vasey, S.M., Award of Excellence to the Outstanding Senior in Speech Arts - donated by Reverend Vincent R. Vasey, S.M.

Communication Management - The Ellen M. Murphy Award of Excellence to the Outstanding Senior in Communication Management.

Computer Information Systems - Pearson Senior Book Award for Excellence in Computer Information Systems - donated by the Pearson Publishing Company.

Computer Science - Award for Outstanding Service to the Department of Computer Science.

Computer Science - Chair's Award for Excellence in Computer Science.

Computer Science - The Lawrence A. Jehn Alumni Award for Excellence in the Senior Class.

Computer Science - Pearson Senior Book Award for Excellence in Computer Science - donated by the Pearson Publishing Company.

Computer Science - The Father Thomas Schoen Award for Innovative Programming.

Continuing Education - The Nora Duffy Award to a Re-entry Student Who Has Overcome Significant Obstacles in order to Complete a College Degree.

Cooperative Education - Award of Excellence to the Outstanding Cooperative Education Student in Business Administration - sponsored by the Mead Corporation Foundation.

Cooperative Education - Award of Excellence to the Outstanding Cooperative Education Student in Computer Science-Computer Information Systems - sponsored by the Marathon Oil Foundation.

Cooperative Education - Award of Excellence to the Outstanding Cooperative Education Student in Engineering - sponsored by the Dayton Power and Light Company.

Cooperative Education - Award of Excellence to the Outstanding Cooperative Education Student in Engineering Technology - sponsored by Earl C. Iselin Jr. in honor of his father.

Criminal Justice - The Sheriff "Beno" Keiter Memorial Scholarship Award to the Outstanding Junior or Senior in Criminal Justice - donated by friends of "Beno" Keiter.

Early Childhood Education - The Kacie Hausfeld Award of Distinction to the Graduating ECE Senior Who Displays the Spirit of Kacie: a Passion for Teaching; a Commitment to Service; a Vibrant and Encouraging Leader; and an Enthusiasm for Life.

Economics - The Dr. E. B. O'Leary Award of Excellence to the Outstanding Senior Majoring in Economics.

Electrical and Computer Engineering - The Thomas R. Armstrong '38 Award of Excellence for Outstanding Electrical Engineering Achievement in Memory of Brother Ulrich Rappel, S.M., and W. Frank Armstrong.

Electrical and Computer Engineering - The Anthony Horvath '22 and Elmer Steger '22 Award of Excellence to the Outstanding Senior in Electrical Engineering - donated by Anthony Horvath and Elmer Steger.

Electrical and Computer Engineering - The Mary C. Millette Endowment Award for the Outstanding Senior Electrical Engineering Student in Memory of Mary C. Millette.

Electrical and Computer Engineering - The Brother Louis H. Rose, S.M. '33 Award of Excellence to the Outstanding Junior in Electrical Engineering.

Electronic Engineering Technology - The Richard R. Hazen Award of Excellence for the Outstanding Graduate of the Electronic Engineering Technology Program - donated by alumni and friends of the department.

Elementary Education - The George A. Pflaum '25 Award of Excellence to the Outstanding Students in Early Childhood and Middle Childhood Education - donated by George A. Pflaum Jr.

Engineering/Humanities - The James L. Heft, S.M., Award of Excellence to the Graduating Senior Who Demonstrates a High Degree of Integration of these Different Fields of Knowledge: Humanities and Engineering - donated by Dr. Rocco M. Donatelli.

Engineering Technology - The L. Duke Golden Award of Excellence to the Outstanding Senior in Engineering Technology - donated by the Gamma Beta Chapter of Tau Alpha Pi Honor Society.

English - The Patricia B. Labadie Award for Excellence in Composition.

English - The Brother Thomas P. Price, S.M., Award of Excellence to the Outstanding Senior in English - donated by the University of Dayton Mothers' Club.

English Education - The Dr. Harry E. Hand Memorial Award of Excellence - donated by the faculty of the Department of English and the Department of Teacher Education.

Entrepreneurship - Award of Excellence to the Graduating Senior Majoring in Entrepreneurship Who Best Embodies Outstanding Academic Achievement - sponsored by Fifth Third Bank.

Entrepreneurship - Entrepreneurial Leadership Award to the Graduating Senior Majoring in Entrepreneurship Who Exhibits the Greatest Potential for Leadership as an Entrepreneur - sponsored by Robert F. Chelle, Crotty Center founding director.

Environmental Biology - Environmental Biology Award of Excellence to the Outstanding Environmental Biology Major Who Excels in all Areas of Academic Scholarship and Overall Service.

Environmental Biology - Environmental Biology Internship Achievement Award of Excellence to the Environmental Biology Major Who Has Demonstrated Significant Achievement while Pursuing Practical Experience through the Internship Program.

Finance - Award of Excellence to the Outstanding Senior Majoring in Finance.

Finance - Davis Center for Portfolio Management Excellence in Leadership Award to the Outstanding Senior on the Center for Portfolio Management Team.

Finance - Flyer Investment Excellence in Leadership Award to the Outstanding Student on the Flyer Investment Portfolio Management Team.

Finance - The Douglas R. Scott "Best Efforts Award" to the Finance Major Deemed to Have Worked the Hardest Both in and out of the Classroom.

General Excellence - The Mary M. Shay Award of Excellence in Both Academic and Extracurricular Activities (Seniors only) - donated by the Poelking Family.

Geology - The George H. Springer Scholarship to the Outstanding Senior in the Geology Department - donated by alumni of the department.

Health and Sport Science - The Thomas J. Frericks Award of Excellence to the Outstanding Senior in Sport Management - donated by the faculty of the School of Education.

Health and Sport Science - The James M. Landis Memorial Award of Excellence for the Outstanding Health and Sport Science Senior in Science Core Courses.

Health and Sport Science - The James B. LaVanche Award of Excellence to the Outstanding Scholar-Athlete Graduating in the Department of Health and Sport Science - donated by the faculty and alumni of the department.

Health and Sport Science - The John L. Macbeth Memorial Award of Excellence to the Outstanding Student in Health and Sport Science - donated by Mrs. John L. Macbeth.

Health and Sport Science - The Elizabeth L. Schroeder Award of Excellence to the Outstanding Senior in the Food and Nutrition Program for Academic, Departmental and Professional Performance.

History - The Caroline Beauregard Award of Excellence to the Outstanding Junior Majoring in History - donated by family and friends in her memory.

History - The Dr. Samuel E. Flook Award of Excellence to the Outstanding Senior Majoring in History - donated by Dr. Samuel E. Flook.

History - The Betty Ann Perkins Award for Excellence in Women's and Family History - donated by her family.

History - The Dr. George Ruppel, S.M., Award of Excellence in Historical Research.

History - The Steiner-Beauregard Phi Alpha Theta Service Award for Significant Service Promoting the Activities of the Delta Eta Chapter (Delta Eta Chapter members only) - donated by Dr. Rocco M. Donatelli.

Humanities - The Rocco M. Donatelli Award to the Humanities Senior with the Strongest Quantitative and Qualitative Record in Elective Science Courses.

Human Rights - Award of Excellence to Outstanding Senior.

Human Rights - Award of Excellence to Outstanding Junior.

Industrial Engineering Technology - The James L. McGraw Award to the Outstanding Graduate of the Industrial Engineering Technology Program - donated by the Dayton chapter of the Institute of Industrial Engineers.

Industrial Engineering Technology - The Raymond B. Puckett Memorial Award to the Outstanding Junior in Industrial Engineering Technology.

International Business - Award of Excellence to the Graduating Senior Majoring in International Business Who Has Best Combined Academic Achievement with Service to the University and Community.

International Studies - The Dr. Margaret P. Karns Award for Academic Excellence and Service in Global and Local Issues.

International Studies - Outstanding Senior Award for International Studies.

International Studies - International Studies Peer Mentorship Award.

Languages - The Brother John R. Perz, S.M., Award of Excellence to the Outstanding Senior in Modern Languages - donated by the Joseph Poelking Sr. family.

Languages-French - The Brother George J. McKenzie, S.M., Award of Excellence to the Outstanding Senior in Written French - donated by a friend.

Languages-French - The Professor Enrique Romaguera Award of Excellence to the Outstanding Senior in Spoken French - donated in honor of his retirement in May 2005.

Languages-German - The Dr. Elke Hatch Award of Excellence to the Outstanding Senior German Major.

Languages-Spanish - The Dr. James M. Ferrigno Award of Excellence to the Outstanding Senior in Spanish - donated by Enrique Romaguera and Mary A. Ferrigno.

Leadership - Alumni Award in Leadership to the Graduating Senior Majoring in Leadership Who Best Embodies the Principles of Learn, Lead and Serve - sponsored by Charles Huston Brown '20 and Maurice F. Krug '55.

Leadership - Leadership Award of Excellence to the Graduating Senior Majoring in Leadership Who Best Embodies Outstanding Academic Achievement - sponsored by the Reynolds and Reynolds Company and the Standard Register Company.

Leadership - Wall Street Journal Award for General Management to the Graduating Senior in Leadership and/or Entrepreneurship Considered to Have the Greatest Potential for General Management Responsibilities - sponsored by Dow Jones and Company.

Library - The Brother Frank Ruhlman, S.M., Award of Excellence for Literary Achievement.

Management and Marketing - Management/Marketing Department Award for Perseverance to the Graduating Senior Majoring in Entrepreneurship, Leadership or Marketing Who Has Displayed the Most Initiative and Perseverance in Pursuing an Undergraduate Education - sponsored by the faculty of the management and marketing department.

Management Information Systems - Management Information Systems Design Project Award to the Team Producing the Best Senior Year MIS Project.

Management Information Systems - Management Information Systems Award to a Graduating Senior in MIS for Outstanding Contributions to the MIS Program.

Management Information Systems - Management Information Systems Scholarship Award to a Graduating Senior in MIS for Outstanding Academic Achievement.

Manufacturing Engineering Technology - Dayton Chapter, Society of Manufacturing Engineers Award of Excellence for Manufacturing Engineering Technology Achievement.

Manufacturing Engineering Technology - Dayton Chapter, Society of Manufacturing Engineers Award of Excellence to the Outstanding Graduating Senior in Manufacturing Engineering Technology.

Marketing - Marketing Award of Excellence to the Graduating Senior Majoring in Marketing Who Best Embodies Outstanding Academic Achievement.

Marketing - Marketing Career Award to the Graduating Senior Majoring in Marketing Who Exhibits the Greatest Potential in Marketing.

Marketing - Marketing Service Award to the Graduating Senior Majoring in Marketing Who Best Embodies the Principles of Learn, Lead and Serve.

Mathematics - Senior Award for Academic Excellence in Mathematics.

Mathematics - Senior Award for Excellence in Support of Mathematics.

Mathematics - Sophomore Award for Excellence in Mathematics.

Mathematics Education - The Brother Joseph W. Stander, S.M., Award of Excellence to a Graduating Senior in the Teacher Licensure Program with a Principal Teaching Field in Mathematics.

Mechanical and Aerospace Engineering - Class of 1902 Award of Excellence for Outstanding Mechanical Engineering Achievement - donated by Michael J. Gibbons, 1902, in memory of Warner H. Kiefaber, 1905.

Mechanical and Aerospace Engineering - The Professor Henry Chuang Award for Excellence in Energy Conservation and Waste Management.

Mechanical and Aerospace Engineering - The Bernard F. Hollenkamp '39 Memorial Award of Excellence to the Outstanding Senior in Mechanical Engineering - donated by Louise A. and Mrs. Lucille Hollenkamp.

Mechanical and Aerospace Engineering - The Martin C. Kuntz, 1912, Award of Excellence to the Outstanding Junior in Mechanical Engineering - sponsored by the University of Dayton Alumni Association since 1962.

Mechanical and Aerospace Engineering - The Brother Andrew R. Weber, S.M., Award of Excellence for Outstanding Service and Achievement in Mechanical Engineering.

Mechanical Engineering Technology - Dayton Chapter, Society of Manufacturing Engineers Award of Excellence for Mechanical Engineering Technology Achievement.

Mechanical Engineering Technology - The Jesse H. Wilder Award of Excellence to the Outstanding Graduating Senior in Mechanical Engineering Technology - sponsored by the Dayton Chapter, Society of Manufacturing Engineers.

Military Science - Department of the Army Award. The Superior Cadet Award, provided by the Department of the Army, to the Outstanding Cadet of each academic year.

Military Science - The Brian J. Bentz Memorial Scholarship Award to the Outstanding Junior ROTC Cadet Who Exemplifies the Dedication and Commitment for Further Study in Military Science - donated by his family and friends.

Military Science - The Lieutenant Robert M. Wallace '65 Memorial Award of Excellence in ROTC - donated by his family and friends.

Music - Department of Music Senior Award for the Outstanding Collaborative Pianist.

Music - Department of Music Senior Award for Outstanding Contribution to University Concert Bands.

Music - Department of Music Senior Award for Outstanding Contribution to University Athletic Bands.

Music - Department of Music Senior Award for Outstanding Contribution to University Jazz Bands.

Music - Department of Music Senior Award for Outstanding Contribution to the University Orchestra.

Music - Department of Music Senior Award for Outstanding Contribution to the University Vocal Ensembles.

Music - The Brother Joseph J. Mervar, S.M., Award of Excellence to the Outstanding Student Majoring in Music.

Music - NAFME Professional Achievement Award.

Music - The Brother Todd Ridder, S.M., Award of Excellence for Outstanding Service by a Student Majoring in Music.

Music - Phi Mu Alpha College Honor Award for Musicianship, Scholarship and General Contributions to the College Chapter.

Music - Phi Mu Alpha Professional Music Fraternity Scholastic Award to the Chapter's Graduating Senior Who Has Attained the Highest Scholastic Rating.

Music - Sigma Alpha Iota College Honor Award for Musicianship, Scholarship and General Contributions to the College Chapter.

Music - Sigma Alpha Iota Professional Music Fraternity Scholastic Award to the Chapter's Graduating Senior Who Has Attained the Highest Scholastic Rating.

Operations and Supply Management - Operations Management Outstanding Scholarship Award to a Graduating Senior in OPS for Academic Excellence.

Operations and Supply Management - Operations Management Outstanding OM Senior Project Award to the Team Producing the Best Senior Year OPS Project.

Operations and Supply Management - Operations Management Professional Service Award to a Graduating Senior in OPS for Outstanding Contributions to the OPS Program.

Philosophy - The Reverend Charles Polichek First Award of Excellence to the Outstanding Senior in Philosophy.

Philosophy - The Reverend Charles Polichek Second Award of Excellence to the Outstanding Senior in Philosophy.



Philosophy - The Richard R. Baker Award of Excellence in Philosophy to a Graduating Student Who Has Earned Distinction in the Study of Philosophy through Commitment to Philosophical Inquiry and Assisting Other Undergraduate Students in Their Pursuit of Philosophical Studies.

Philosophy - The Reverend Charles C. Bloemer, S.M., Award of Excellence to the Outstanding Junior Majoring in Philosophy - donated by a friend.

Philosophy - The Raymond M. Herbenick Award of Excellence in Interdisciplinary Integration to a Student Completing the Core Program - donated by the Department of Philosophy faculty.

Physics - The Caesar Castro Award of Excellence to a Sophomore for Outstanding Scholarship in the General Physics Lecture and Laboratory Sequence - donated in memory of Caesar Castro by Mrs. C. C. Castro and the Department of Physics.

Physics - Sigma Pi Sigma Award of Merit to a Senior in Recognition of Outstanding Academic Achievement and Involvement in Physics - sponsored by the Department of Physics and the Sigma Pi Sigma honor society of the Society of Physics Students.

Political Science - The Brother Albert H. Rose, S.M., Award of Excellence to the Outstanding Senior in Political Science - donated by Joseph Zusman '65.

Political Science - The Eugene W. Stenger '30 Memorial Award of Excellence to the Outstanding Junior in Political Science - donated by Mrs. Eugene W. Stenger.

Premedicine - Miami Valley Academy of Family Physicians Award to the Graduating Senior whose Activities Exemplify the Philosophy of Family Medicine.

Premedicine - The Brother Francis John Molz Memorial Award to the Outstanding Senior in Premedicine. Awarded annually to the student who best demonstrates the qualities of unselfishness, community service and academic achievement - sponsored by Alpha Epsilon Delta.

Premedicine - Montgomery County Medical Society Award to the Outstanding Senior in a Premedical Curriculum.

Premedicine - The Joseph E. Scherger, M.D., MPH Leadership in Medicine Award to a Graduating Premedical Student Who Has Demonstrated Leadership Toward Improving the Health of the Public Through Better Health Care.

Psychology - The Charles E. Kimble Research Award to the Graduating Senior Who Best Demonstrated Research Excellence in Psychology.

Psychology - The Kenneth J. Kuntz Award for Outstanding Service - donated by the Department of Psychology faculty.

Psychology - The Reverend Raymond A. Roesch, S.M., Award of Excellence to the Outstanding Student in Psychology - donated by Reverend Raymond A. Roesch, S.M. '36.

Rector - The Maureen E. O'Rourke Marianist Student Award to the Graduating Senior Who Exemplifies the Marianist Charism on Campus.

Religious Studies - The William Joseph Chaminade Award of Excellence, in memory of Mr. and Mrs. George W. Dickson, to the Outstanding Student in Theology - donated by Reverend John Dickson, S.M. '36.

Religious Studies - The Monsignor J. Dean McFarland Award of Excellence to the Outstanding Junior Majoring in Religious Studies.

Secondary Education - The Brother Louis J. Faerber, S.M., Award of Excellence to the Outstanding Student in Adolescence to Young Adult Education - donated by the University of Dayton Mothers' Club.

Social Work - The Joseph Zusman '65 Award of Excellence to the Outstanding Senior in Social Work Studies - donated by Joseph Zusman.

Sociology - The Dr. Edward A. Huth Silver Anniversary Award of Excellence to the Outstanding Student in Sociology - donated by Joseph Zusman '65.

Sociology - The Dr. Martin Luther King Memorial Award in Human Relations for Excellence in Scholarship, Christian Leadership and the Advancement of Brotherhood and Sisterhood - donated by Dr. Edward A. Huth.

Sociology - The Reverend Andrew L. Seebold Award of Excellence to the Outstanding Senior in Sociology.

Teacher Education - The William A. Beitzel Award to the Outstanding Student in Intervention Specialist Education - donated by Dean Emeritus Ellis A. Joseph.

Teacher Education - The Raymond and Beulah Horn Award of Excellence to the Outstanding Student in the Area of Intervention Specialist Education - donated by Dean Emeritus Ellis A. Joseph.

Teacher Education - The Dr. Thomas C. Hunt Award for the Outstanding Students Demonstrating Commitment to Catholic Education.

Teacher Education - The Daniel L. Leary Award for the Outstanding Research and Development Activity by a Student Seeking Teacher Licensure in the School of Education - donated by Dean Emeritus Ellis A. Joseph.

Teacher Education - The Frank and Lois New Award for Outstanding Achievement to a Graduating Senior in the Teacher Education Program with a Principal Teaching Field in Intervention Specialist Education.

Teacher Education - The Reverend George J. Renneker, S.M., Award of Excellence for Outstanding Achievement in Teacher Education.

Teacher Education - The Dr. Mary R. Sudzina Award for Demonstrated Excellence in Case Study Analysis in Adolescence to Young Adult Education.

Theatre - The Dr. "G." Award for Outstanding Commitment to Mainstage Theatre Recognizing a Graduating Senior Who Has Demonstrated a Willingness to Involve Himself/Herself in the Wide Spectrum of Theatrical Productions on the Boll Theatre Mainstage.

University Advancement - Award of Excellence for Contribution of Service to the Community.

University Honors Program - The Patrick F. Palermo Honors Program Founders Award for the Exemplary Honors Thesis Project Involving International Research, Service and Leadership in Community, or Advances the Realization of a Just Society.

Visual Arts-Fine Arts - The Mary Ann Dunsky Award to the Outstanding Senior in Studio Art.

Visual Arts-Fine Arts - The Bela Horvath Award for Excellence in Representational Art.

Women's Studies - The Joyce Durham Award for the Best Student Essay on the Subject of Women or Gender.

Women's Studies - The Susan R. Hermes Award for Excellence in Women's Studies - donated by Drs. Jane S. Zembaty and Patricia A. Johnson.

## Class Attendance Policy

It is desirable for students to attend all classes. Listening to the lectures of instructors and being involved in classroom discussions should (1) provide guidelines and goals in the course of study, thus lending direction to the study activities of the student; (2) provide instances of the way of thinking and methodology employed by an academic discipline in formulating and solving problems; and (3) stimulate an awareness of/ and interest in the course topics beyond the levels acquired by textbook reading.

Because textbook material is generally beneath the level of the current state of knowledge, instructors acquaint the student with new ideas and integrate this material into the course topics. Students are responsible for being aware of the proceedings and material covered in each class period.

Students must attend all announced tests and submit assigned written work on the date set by the instructor; it is recommended that the instructor announce such tests and assignments at least a week in advance. The action taken as a consequence of missing a test or an assignment will be determined by the instructor and will be based on a consideration of the individual circumstances involved.

To assist first-year students in their transition to college responsibilities, it is felt that a policy of compulsory attendance is necessary. Therefore, first-year students will be permitted only a limited number of absences. For first-year students, the allowable number of absences in the first term or in the second term will be equal to twice the meeting times a week (or four class days in any third-term session).

A student exceeding this number will be referred to the student's dean for possible counseling and appropriate action. Any undergraduate student who has not yet accrued 30 semester hours of credit is considered a first-year student.

In addition to the first-year student policy, faculty may institute an attendance requirement. This may be done for any course (including seminars, laboratories, performance courses, clinical field-based courses and the like) provided that the policy is approved by a faculty committee of the department and/or the department chair. If attendance is used as a grading component, the instructor is obligated to clarify his or her classroom policy regarding absences in writing in the syllabus provided during the first full week of the semester.

In cases where unusual circumstances combine to cause a student to miss any class time for reasons beyond the student's control (viz., personal illness, death in the immediate family, religious holidays, University-sanctioned activity, emergency limitations on commuter travel in severe weather-related conditions), faculty members should give due diligence to reviewing the student's particular case

Let it be noted that to insure accuracy of records, every student must be present at class during the first week of each term.

## Class Standing

First-Year student: 0-29.9 semester hours completed

Sophomore: 30-59.9 semester hours completed

Junior: 60-89.9 semester hours completed

Senior: 90 semester hours completed and over

## Graduation

Commencement at the University of Dayton is formal recognition of students who are graduating from the University. Consequently, University policy limits participation in commencement to students who have completed all the requirements for their degree. However, undergraduate students who are short not more than seven credit hours prior to the May commencement may, with the approval of their dean, participate in the May graduation ceremony. Such students must be registered for sufficient hours to complete degree requirements during the subsequent summer terms at UD, or have attained approval to fulfill their remaining requirements at another institution, and must provide official documentation of work completed no later than the official date for submission of grades at the conclusion of UD's second summer session. Any exceptions to this policy are the decision of the dean of the student's academic unit. After all degree requirements are met, the degree will be conferred on the next conferral date as noted on the official university academic calendar.

If the student is declaring candidacy for Graduation, a graduation application must be completed online (<https://porches.udayton.edu>). If a student is receiving two degrees, two separate graduation applications, one for each degree, must be completed. For further information visit the Graduation website (<http://www.udayton.edu/flyersfirst/graduation>).

After the summer of 2002, students completing their degree requirements during the summer term will receive a diploma and their academic transcript will denote an August graduation date, but they will have to wait until December to participate in a graduation ceremony.

## Dean's List

At the conclusion of the Fall, Spring and Summer terms, in both the college and the professional schools, any currently registered, degree-seeking undergraduate student completing a minimum of twelve semester hours with a grade point average of 3.50 or above is named to the Dean's List. For purposes of this list, the total hours completed during the multiple Summer sessions are treated as being a single term.

### Dean's Recognition List

At the conclusion of the Fall, Spring and Summer terms, in both the college and the professional schools, any currently registered, degree-seeking undergraduate student completing no less than six semester hours and not more than eleven and one-half semester hours with a grade point average of 3.50 or above is named to the Dean's Recognition List. For purposes of this list, the total hours completed during the multiple Summer sessions are treated as being a single term.

The Dean's List and Dean's Recognition List can be viewed at: <http://www.udayton.edu/flyersfirst>.

## Final Exam Policy

To protect and strengthen the academic integrity of the final examination week at the University of Dayton, the following policy on final examination week has been adopted effective for the 2004-05 academic year.[1]

1. Final examination week is defined as the sum of one full week of scheduled examinations, the weekend immediately preceding and a minimum of one study day. Multiple study days are preferred.
2. Every course of study, undergraduate and graduate, must conclude with an academically rigorous culminating learning experience, normally a final examination. A culminating learning experience may involve traditional in-class examinations, presentations, performances, critiques, portfolios or other similar experiences. Laboratory, studio or similar courses may be regularly exempt from this requirement, with the approval of the department chair and a designated administrator in the office of the dean.
3. No new material may be introduced in a course after the last scheduled class meeting. No final examination may be scheduled at a time other than the time prescribed by the Registrar during final examination week, with the sole exception of block examinations. No final examination of any kind may be given prior to final examination week. Any exceptions must receive the approval of the department chair.
4. A block examination is a common examination that covers several sections of the same class, taught by different instructors, for the purpose of establishing a uniform scale of achievement. Such examinations are scheduled through the registration office. Multiple sections of a class, taught by the same instructor, are not eligible to give block examinations unless they are part of a class taught by more than one instructor.
5. Grades for all students, including graduating students, will be reported by a single deadline, as determined by the Registrar.
6. When a student has three or more final examinations scheduled for the same day, faculty are encouraged to accommodate the individual student on an alternative day agreeable to both the student and the instructor. The student must make the request by the last scheduled class meeting.
  - When a student with a disability has two or more final exams scheduled for the same day, faculty are encouraged to accommodate the individual student on an alternative day agreeable to both the student and the instructor which may include use of an alternative testing site. The student must make the request by the last scheduled class meeting.[2]
7. Students must have access to graded examinations for a period of six months after the examination has been given.
8. Any on-going or regular exception to the final examination policy requires the approval of the department chair and a designated administrator in the office of the dean.
9. The School of Law is exempt from this policy due to its independent academic calendar.

[1] Approved by the Academic Senate December 12, 2003, document number I-03-10, Final Examination Week

[2] Amendment to Academic Senate document number I-03-10, Final Examination Week, approved February 6, 2004

## First-Year Experience Program

The University First-Year Experience Program includes a course, offered for a minimum of one credit, for all first-year students in the College of Arts and Sciences, the School of Business Administration, the School of Education and Health Sciences and the School of Engineering. This course is combined with selected programs and services offered by Student Development, Campus Ministry and academic support programs. First-year students entering in January and transfer students will be offered an alternative program to meet their needs.

The First-Year Experience Program:

- Introduces the distinctive nature of the Catholic/Marianist educational experience as a foundation for learning and life
- Provides an academic foundation that helps students develop as connected learners, acquire general competencies necessary for their success, understand the nature and requirements of chosen and/or potential programs of study and be aware of a range of opportunities for enriching their academic experience on campus, across the nation and around the world
- Prepares students in critical reflection on the moral and ethical dimensions of their lives, challenges students to treat each individual with equality and respect, fosters the recognition of individual rights and responsibilities of each member of the community, and establishes integrity as central to professional and career decisions
- Promotes the development of self-understanding and skills that enable students to take responsibility for their academic success and lifelong learning
- Promotes and supports, both in and out of the classroom, the physical, emotional, spiritual and psychological health of all students
- Nurtures students' creativity and varied talents; and leads to enriched lives of learning, leisure, solitude, leadership and service.

### First-Year Experience Course

Every first-year student entering in the fall term must complete the First-Year Experience course offered by his or her academic division. This course will be offered for a minimum of one credit. The First-Year Experience course will not count against the seventeen credits per term limit covered by full-time tuition.

For first-year students entering the University in the winter term and for transfer students, each division will develop a plan to meet the goals of the First-Year Experience while serving the specific needs of these students.

The First-Year Experience courses offered by each division and units within divisions must include common elements as approved by the University. Beyond these common elements the divisions and academic units offering the course will have a great deal of flexibility in how the course is offered and what will be included in the syllabus.

## General Requirements

All bachelor's degrees granted by the University of Dayton require a minimum of 120 semester hours of credit with a cumulative grade point average of at least 2.0.

Specific requirements for the various degrees are listed under the schools granting the degrees. For more information, visit the sections on the four divisions.

One year (thirty semester hours) of residence is a minimum requirement for any bachelor's degree. The semester hour is the unit by which the University measures its course work, and the number of semester hours is determined by the number of hours a week in class and the number of weeks in the session. One semester hour is assigned to a class which meets fifty minutes a week over the period of one term.

Students enrolled in the University as candidates for degrees should not take courses at other colleges or universities without first obtaining written permission from their respective deans. If the permission is granted, the dean will request "transient status" for such students at designated institutions. The University reserves the right not to accept credits for such courses when this procedure has not been followed.

The Bachelor of Science in Education and Health Sciences may be awarded to holders of nonprofessional degrees from the University of Dayton with the completion of a minimum of thirty semester hours prescribed by the School of Education and Health Sciences beyond the requirements of the nonprofessional degree. The Bachelor of Arts or Bachelor of Science may be awarded to holders of professional degrees from the University of Dayton upon the completion of the requirements for such degrees. Any student wishing to obtain a second bachelor's degree may do so by completing the requirements for the second degree as determined by the faculty of the college or school in which this degree is offered.

Ordinarily, a student who earned a first bachelor's degree or an associate degree at another institution must complete six semester hours of philosophy and/or religious studies at the University of Dayton. Such a student may be required to complete the prescribed twelve semester hours of philosophy and/or religious studies, if in the judgment of the dean, equivalent coursework had not been earned as a part of the program leading to the first degree.

All students following four-year programs are required to complete successfully the University requirements in Common Academic Program.

## Grade Appeals

Procedures for the appeal of grades differ for the College of Arts and Sciences and the Schools of Business Administration, Education and Health Sciences, and Engineering. The student should consult the appropriate dean's office for the grade appeal procedure which would apply to the student's discipline.

## Grades and Scholarship

Final grades are submitted at the end of the term, and these are made part of a student's permanent record in accord with the option chosen by the student. A progress report of every first-year student in each of the classes is submitted to the Registrar by every instructor at the middle of each term.

Undergraduate students are permitted a selection from two alternative grading options. The course grading options are as follows:

- Option 1-A, A-, B+, B, B-, C+, C, C-, D, F
- Option 2-S/NC-Satisfactory (C- or higher)/No Credit (D, F)
- Option 3-EM-Examination Credit

In addition to those courses which must be taken under Option 2, a student may take a maximum of fifteen semester hours under Option 2 within the hours required for graduation in the degree program. A student

may take any course beyond the minimum hours required for graduation in the degree program under Option 2. All courses that are used to fulfill the Common Academic Program must be taken under Option 1. The college/school or department may place further restrictions on the use of Option 2. Exceptions to this policy may be made by the dean (or the dean's designee) of the college/school in which a student is enrolled. NOTE: Studies have shown that Satisfactory/No Credit grades (Option 2) on one's academic record may be a negative factor in the evaluation of application for transfer to some undergraduate schools, for admission to most professional schools (law, medicine, etc.) and many graduate schools, and for employment in some fields.

The official marks with their meanings and quality-point values are as follows:

- A - Excellent; for each semester hour, 4.0 quality points are allowed.
- A- - For each semester hour, 3.6667 quality points are allowed.
- B+ - For each semester hour, 3.3333 quality points are allowed.
- B - Good, for each semester hour, 3.0 quality points are allowed.
- B- - For each semester hour, 2.6667 quality points are allowed.
- C+ - For each semester hour, 2.3333 quality points are allowed.
- C - Fair; for each semester hour, 2.0 quality points are allowed.
- C- - For each semester hour, 1.6667 quality points are allowed.
- D - Poor but passing; for each semester hour, 1.0 quality point is allowed.
- F - Failed. This mark indicates poor scholastic work, or failure to report withdrawal from a course. In such cases, required courses must be repeated or retaken, preferably at the next opportunity.
- S - Satisfactory. This mark indicates credit given for a course taken under grading Option 2, C- or higher. The S credit shall be counted as hours only and shall not be considered in determining a student's cumulative point average.
- NC- No Credit. This mark indicates no credit given for a course taken under grading Option 2, below C-. In such cases, required courses must be repeated or retaken, preferably at the next opportunity.
- I- Incomplete. This grade indicates that the student has obtained the instructor's recommendation, subject to the chairperson's approval, to complete some portion of the work of the term that for reasons beyond the student's control was not completed before the end of the term, provided that the rest of the work has been of satisfactory grade. An I must be removed within thirty days from the date listed on the grade report, or it will be changed to an F or NC (option 2) on the student's permanent record. The time limit may be extended under exceptional circumstances, with the approval of the dean, if application for the extension is made within the thirty-day period noted.
- W- Withdrawn. During the first three weeks of a full term (or the first eight class days of a split term) a student may withdraw from a class without record by obtaining a drop (withdrawal) form from the Flyers Frist Office, having it signed by the academic advisor, and processing it. Beginning with the fourth week of the term and continuing through the fourth week after mid-term (or the ninth class day of a split term and continuing through the fourth week of the split term), a student may withdraw with a W by the same process, except that the drop form must have the approval signature of the instructor as well as that of the advisor. For the remainder of the term, until the last day of classes, a student may withdraw with a W only by making a formal request to the dean, who consults with the student's instructor before granting such a request. During this period, a W will be permitted only for special nonacademic reasons. These include,



but are not limited to, financial difficulties and matters of personal or family health. Documentation may be required. When a student finds it necessary to withdraw from the University, for any reason whatsoever, it is important that the dean be notified immediately. Financial adjustments, if allowed, will be made only from the date on the withdrawal form. Total withdrawal from all classes requires the processing of the drop form. This requires one signature from the student's Academic dean. It is the student's responsibility to initiate and process all withdrawals; the faculty do not initiate withdrawals for students except for auditors. In addition, the student is urged to process the withdrawal as soon as possible after deciding to drop a course. Students cannot assume that withdrawals are granted automatically if they stop attending class. Any failure to process the drop (withdrawal) form will incur a grade of F for the course or courses involved. The F's so accumulated are always included in the cumulative grade-point average.

- **IP - In Progress.** This symbol is used in lieu of a grade for a course which has not terminated at the end of a term or summer session. A grade with corresponding credit and quality points (see grading Options 1 and 2) will be assigned when the course has been completed. Replaced "P" in September 2008.
- **N- No grade was reported by the instructor.**
- **K- Credit.** This mark is used only for credits accepted as transfer credit from other institutions. No quality points are allowed. K credit is not allowed for English courses taken at institutions in countries where the native language is other than English.
- **X- Audit.** This mark indicates that the student has registered to audit the course. No credit hours or quality points are awarded for this mark. Any course taken for audit may not be retaken for credit. If, in the opinion of the instructor, a student has not attended and participated in a sufficient number of classes, the instructor will assign a W.
- **R- Retaken.** An undergraduate student who receives a grade of D or F in a course taken under Option 1 at the University of Dayton may retake that course under Option 1 at the University of Dayton and remove the original D or F from the cumulative GPA. When a course has been retaken and the subsequent grade is higher than or equal to the previous grade, the previous grade will not count towards the student's cumulative GPA. The transcript will reflect this event by noting the original grade with an "E" (Grade Excluded) and the term and cumulative GPA's will be adjusted. A student may have no more than 15 semester hours of "retaken" grades. Cumulative grade point averages will reflect the changes within 30 days after the grades are posted.

If a student retakes a course in which the topics vary, it must be demonstrated that the retaken course contains the same material as the original course in which the student received a D or F. Courses taken by students prior to the initiation of this policy, and before completion of an undergraduate degree, may be retaken within the guidelines of this policy.

Exceptions to this policy may be made by the dean (or the dean's designee) of the school or college in which the student is enrolled.

#### Addendum to Retake Policy

When a student retakes a course which he or she has taken more than once previously, the retaken course will serve to replace both previous grades (if it is the same as or higher than each). The number of "retaken hours" will be counted as the total hours for the two courses in which the grades are replaced; e.g., if a student

retakes PSY 101 in which he or she had previously earned F two times, the new passing grade will replace both Fs, but will count as 6 credit hours taken instead of 3. This student will then be able to take up to 9 additional course grades.

#### EM- Examination

This mark indicates University of Dayton credit given to a student on the basis either of the Advanced Placement Program of the CEEB or of examinations taken prior to or after admission to the University. The required level of achievement on these examinations is determined by the department in which the course is taught. This credit shall be assigned only on authorization of the registrar. No quality points are allowed. A student must be registered at the University of Dayton to obtain credit. EM credit is limited to 24 semester hours (exclusive of AP and CLEP General Examination credits).

No grade changes of any kind is permitted after thirty days from the date listed on the grade report.

The University reserves the right to change the grading system.

#### Grade-Point Averages

##### Semester Grade-Point Average:

Is the total number of quality points divided by the number of semester credit hours carried by the student under Option 1.

##### Cumulative Grade-Point Average:

Is the total number of cumulative quality points divided by the number of cumulative credit hours carried by the student under Option 1. If a course is repeated, the grade points for both the original grade and the new grade are computed. If a course is retaken (see R) and the subsequent grade is higher than or equal to the previous grade, the previous grade will not count towards the student's CGPA henceforth. Marks of I, K, N, IP, S, W, X, NC, and EM are disregarded in the computation of the CGPA.

##### Cumulative Academic Unit Grade-Point Average:

Includes only those courses completed at the University of Dayton and required for the specific degree obtained and/or approved for inclusion by the student's school or college.

## Honors

1. To graduate with honors, a student must have completed a minimum of 60 semester hours at the University of Dayton and have an academic degree program grade-point average at the University of Dayton of 3.50 or higher, based on a 4.00 scale. The academic degree program grade-point average includes all courses taken at the University of Dayton under grading Option 1 and accepted as graduation credits by the student's academic unit, i.e. school or college. Determination of a student's initial honors category recognized in the graduation program is made on the basis of the student's academic record at the conclusion of the term preceding the student's last term at the University or on the basis of the student's academic record at the conclusion of his or her last term.
2. If a student qualifies for honors or moves into a different category of honors on the basis of his or her academic degree program grade-point average, the diploma issued will note the appropriate honor category and notation will be made on the transcript and permanent



record. Due to time constraints no adjustments/corrections can be made to the actual printed graduation program.

3. Honors status will be determined by the academic degree program grade-point average and will include only those courses completed at the University of Dayton. Students who transfer to the University of Dayton under the terms of an articulation agreement with a community college may be eligible for honors at graduation even if they have not completed the minimum of 60 semester hours at the University provided that they have met all terms of the articulation agreement.
4. The notation of honors is made in the commencement program, on the diploma, on the student's permanent record and on the transcript, as follows:
  - Cum Laude- if the academic degree program grade point average is greater than or equal to 3.50 but less than 3.70
  - Magna Cum Laude- if the academic degree program grade point average is greater than or equal to 3.70 but less than 3.90
  - Summa Cum Laude- if the academic degree program grade point average is greater than or equal to 3.90

5. Any exceptions to this procedure are the decision of the dean of the student's academic unit.

## Transfer Policies

### Transfer of Credit Policy

All transfer coursework completed by current UD students for UD credit must be approved in writing by the Dean's office prior to registration for the course. At a minimum, the approval process will include a review of the institution, course descriptions and course syllabus. Additionally, a vita of the professor and/or a copy of the textbook used in the course may be reviewed. Consideration for credit will only be given to transfer courses with a grade of C- or better.

Courses taken in the U.S. must be completed at a regionally accredited institution. Courses taken in a foreign country must be completed at an institution recognized by the foreign country's minister/head of education. Official transcripts must be sent directly to UD from the university and must contain an official seal of the university's office of academic affairs. Other requirements may be necessary (i.e. School of Business courses need to be taken at an AACSB accredited institution) given the specific course in question.

No credit will be granted when a student fails to receive prior written approval from the dean's office or fails to provide official transcripts sent to UD directly from the approved university.

### Internal Transfer Policy

Any undergraduate student having completed one academic semester in good standing at the University of Dayton may initiate a request for Internal Transfer. The student desiring to change his/her major can initiate this process by contacting their advisor and submitting a formal transfer application prior to registration.

To be considered for Internal Transfer the student must meet the following criteria:

- College of Arts & Sciences  
Cumulative GPA:  
1.7 end of first term  
1.7 end of second term

- 1.8 end of third term
- 1.9 end of fourth term
- 2.0 thereafter

- School of Business Administration  
Students must first attend an initial internal transfer meeting with an Academic Advisor in the School of Business Administration. Stop in the Center for Academic Success in Miriam Hall 108 to schedule this initial SBA internal transfer meeting. Minimum Requirements: Cumulative GPA of 2.7, successful completion of an appropriate UD Math course, such as Calculus class, a C+ or higher in MTH 116 or MTH 128, or a B- or higher in MTH 207. Math courses taken at another college or university will NOT be considered.
- School of Education and Health Sciences  
Cumulative GPA of 2.75 or better, and for those seeking teacher licensure, proof must be submitted of satisfactory standardized testing scores.
- School of Engineering  
Cumulative GPA:  
1.7 end of first term  
1.7 end of second term  
1.8 end of third term  
1.9 end of fourth term  
2.0 thereafter

Units will review applications for transfer and make decisions in a timely fashion with communication to the student, the appropriate units and the Registrar. Please note: there are times when the student's desired transfer would not be recommended. This decision will be left to the judgment of the dean or his/her designated representative.

More complete information regarding Internal Transfer to the College or schools may be obtained in the respective dean's office.

## Non-Disability Related Course Waiver Policy

Students may make a request to their department or dean to waive certain required courses. In such cases, students may be required to submit proof of prior knowledge in the subject area (diplomas, certificates, portfolios, auditions, transcripts, etc.). At the request of the dean's office or department, students may be asked to complete departmental exams or to submit additional documentation and records of consultation.

Waiving a course does not confer credit. Students replace a required course (the one which has been waived) with another course that carries the same or more number of credit hours and is at an equal or higher course level. Determination of the appropriate course must take place in consultation with the department and dean's office. This policy applies to all waived courses, including those waived by means of placement exams. In addition, this policy does not apply to students with disabilities who require a course substitution due to a disability. Students with disabilities should consult appropriate university policy for course substitution due to disability.

Any exceptions to this policy are made at the discretion of the appropriate dean's office.

## Student Records

The Family Educational Rights and Privacy Act of 1974 (FERPA) is a federal law. This policy serves to notify students of their rights regarding their education records in accordance with the FERPA and

provide University of Dayton constituents guidelines for maintenance of, access to and release of such records. A complete policy statement on student records in accordance with the requirements of FERPA can be found here ([http://www.udayton.edu/policies/enrollment/ferpa/ferpa\\_policy\\_page.php](http://www.udayton.edu/policies/enrollment/ferpa/ferpa_policy_page.php)).

## Academic Honor Code

### I. Introduction

As a Marianist, Catholic university committed to the education of the whole person, The University of Dayton expects all members of the academic community to strive for excellence in scholarship and in character. As stated in the University's Student Handbook, "The University of Dayton expects its faculty and administration to be instrumental in creating an environment in which its students can develop personal integrity."

To uphold this tradition, the University community has established an academic honor code for all of its students, except Law students who are governed by The University of Dayton School of Law Honor Code. Students are expected to be aware of and abide by the honor codes.

### II. The Honor Pledge

#### The University of Dayton Academic Honor Code: A Commitment to Academic Integrity

I understand that as a student of the University of Dayton, I am a member of our academic and social community, I recognize the importance of my education and the value of experiencing life in such an integrated community, I believe that the value of my education and degree is critically dependent upon the academic integrity of the University community, and so

In order to maintain our academic integrity, I pledge to:

- Complete all assignments and examinations according to the guidelines provided to me by my instructors,\*
- Avoid plagiarism and any other form of misrepresenting someone else's work as my own,
- Adhere to the Standards of Conduct as outlined in the Academic Honor Code.

In doing this, I hold myself and my community to a higher standard of excellence, and set an example for my peers to follow. Instructors shall make known, within the course syllabus, the expectations for completing assignments and examinations at the beginning of each semester. Instructors shall discuss these expectations with students in a manner appropriate for each course.

\* The term instructor may refer to any faculty or staff member

### III. Standards of Conduct

Regardless of motive, student conduct that is academically dishonest, evidences lack of academic integrity or trustworthiness, or unfairly impinges upon the intellectual rights and privileges of others is prohibited. A non-exhaustive list of prohibited conduct includes:

#### A. Cheating on Exams and Other Assignments

Cheating on examinations consists of willfully copying or attempting to consult a notebook, textbook, or any other source of information not

authorized by the instructor; willfully aiding, receiving aid or attempting to aid or receive aid from another student during an examination; obtaining or attempting to obtain copies of any part of an examination (without permission of the instructor) before it is given; having another person take the exam; or any act which violates or attempts to violate the stated conditions of an examination. Cheating on an assignment consists of willfully copying or attempting to copy all or part of another student's assignment or having someone else complete the assignment when class assignments are such that students are expected to complete the assignment on their own. It is the responsibility of the student to consult with the instructor concerning what constitutes permissible collaboration and what materials are allowed to be consulted.

#### B. Committing Plagiarism and Using False Citations

Plagiarism consists of quoting or copying directly from any source of material without appropriately citing the source and identifying the quoted material; knowingly citing an incorrect or fabricated source; or using ideas (i.e. material other than information that is common knowledge) from any source of material without citing the source and identifying the borrowed material. Students are responsible for educating themselves as to the proper mode of attributing credit in any course or field. Instructors may use various methods to assess the originality of students' work, such as plagiarism detection software.

#### C. Submitting Work for Multiple Purposes

Students are not permitted to submit their own or other's work (in identical or similar form) for multiple purposes without the prior and explicit approval in writing of all instructors to whom the work will be submitted. This includes work first produced in connection with classes at the University of Dayton as well as other institutions attended by the student or at places of employment.

#### D. Submitting False Data or Deceptive Information

The submission of false data is a form of academic fraud. False data is that which has been fabricated, altered or contrived in such a way as to be deliberately misleading or to fit expected results. Deception is defined as any dishonest attempt to avoid taking examinations or submitting assignments at the scheduled times by means such as a forged medical certification of absence. Deception also includes falsifying class attendance records or failing to reveal that someone falsified your attendance. Extenuating circumstances such as a personal illness, death in the family, etc. must be negotiated with the instructor.

#### E. Falsifying Academic Documentation and Grade Alteration

Any attempt to forge or alter academic documentation (including transcripts, letters of recommendation, certificates of enrollment or good standing, and registration forms) concerning oneself or others also constitutes academic fraud. Grade alteration consists of an act which dishonestly modifies a grade obtained for a class assignment, examination, or for the course itself.

#### F. Abuse of Library Privileges and Shared Electronic Media

All attempts to deprive others of equal access to any library materials constitute a violation of academic integrity. This includes the sequestering of library materials for the use of an individual or group; a willful or repeated failure to respond to recall notices; and the removal or attempt to remove library materials from any University library without authorization. Defacing, theft, or destruction of books, articles or any other library materials that serve to deprive others of equal access to

these materials also constitute a violation of academic integrity. Malicious actions that deprive others of equal access to shared electronic media used for academic purposes constitute a violation of the Honor Code. This includes efforts that result in the damage or sabotage of campus computer systems.

#### G. Encouragement or Tolerance of Academic Dishonesty

The quality of campus and community life is dependent upon the commitment of each member of the University to a shared set of behavioral standards and values. Adhering to the Academic Honor Code is not limited to direct actions, but also includes any behavior that supports, encourages, or tolerates academic dishonesty.

#### IV. Student Status with Respect to the Academic Honor Code

A. All University of Dayton students, except for Law students who are governed by The University of Dayton School of Law Honor Code, are subject to the Standards of Conduct and procedures of the Academic Honor Code

B. Normally, the maximum penalty for a single proven case of academic dishonesty is an F in the course. No provision can then be made for the student to receive a W. Under some circumstances, such as repeated offenses, theft, intimidation or breaking and entering, additional penalties may be imposed by the University. These penalties may include dismissal from the major, dismissal from the school or college, removal from the University Honors Program or dismissal from the University.

C. All honor code violations, as determined by the instructor after consultation with the student, require that the chair of the department or program director in which the incident occurred be notified of the violation by the instructor. If a student accepts the instructor's accusation and/or penalty, the case will be considered resolved and no further action shall be required. The instructor shall send an Academic Dishonesty Incident Report form to the dean(s) of the student's academic unit(s) – possible double major. If a student does not admit the violation or accept the proposed penalty, the student may contact the chair or program director in which the incident occurred and initiate an appeal process. If the appeal is decided in favor of the student, no report will be placed in the student's file. If during the appeal process the student is found responsible, the report will be placed in the dean(s)' offices of the student's academic unit(s) – possible double major. If the student transfers between academic units, all reports will be transferred to the new dean's office.

D. If a possible violation is reported after the grade for a course has been submitted, the case will be adjudicated only if the Office of the Provost determines that the alleged offense is of sufficient gravity to warrant consideration. Only matters that could reasonably result in sanctions reflected in a student's permanent record will ordinarily meet the "sufficient gravity" test in this context. The Office of the Provost shall decide on the process of adjudication

E. If a student with a possible violation withdraws, transfers or is, for any reason, not currently enrolled at the University the University may maintain a continuing interest in, and complete the adjudication of the matter, if, in the judgment of the Office of the Provost, the matter is of sufficient gravity to warrant resolution. The Office of the Provost shall have the discretion to determine whether the adjudication will occur before or after the student's re-enrollment and the process of adjudication.

F. A student may not graduate with an unresolved Academic Honor Code violation which, in the judgment of the Office of the Provost, is of sufficient gravity to warrant resolution. Certification for the degree will be withheld pending a final resolution of the Academic Honor Code matter. The Office of the Provost shall decide on the process of adjudication

G. If a violation is reported after a student has graduated, transferred or otherwise terminated his or her enrollment at the University, the case will be adjudicated only if the Office of the Provost determines that the case is of sufficient gravity to warrant consideration. The Office of the Provost shall decide on the process of adjudication. In a case involving a student who has already received a degree, sanctions up to and including the revocation of a degree or certificate are possible. The Office of the Provost has the final authority to revise and implement any sanctions.

#### V. Appeal Procedure

A student who believes an accusation of academic honor code violation or penalty is not valid may appeal in the sequential manner listed below. If the student does not appeal the decision of the instructor, or accepts the accusation and penalty at any time during the appeal process, the Academic Dishonesty Incident Report form shall be sent to the student's dean(s) by the instructor.

A. If no resolution occurs in the private conversation with the instructor, the student may appeal to the department chair or program director in which the incident occurred. The student must submit a written account, including a detailed explanation of their actions, along with any circumstances concerning the incident. This appeal must be made within ten business days after meeting with the instructor. The chair may use reasonable means, including meeting with the instructor and student, to reach a determination on the accusation and/or penalty within thirty business days.

B. If no resolution occurs with the department chair or program director, the student has ten business days to file a written appeal to a review committee formed by the department chair or program director in which the incident occurred. The review committee shall be composed of at least two tenured faculty and one student. The review committee will first select a chair, and then meet with the student and instructor involved on separate occasions and gather any additional evidence or information related to this appeal. The student has the right to see and hear the evidence, to question any witnesses against the student, and to present evidence and witnesses on the student's behalf. Both the student and the instructor must cooperate with the review committee. The review committee shall make known its recommendations and the reasons for its recommendations in writing to the department chair or program director, the student, and the instructor within thirty business days.

C. If the student or faculty member disagrees with the review committee's decision, either may then make an appeal to the dean of the unit in which the incident occurred. The dean must make known his or her decision, and reason(s), in writing to the student, the instructor, chair or program director and department review committee within thirty business days.

D. A final appeal may be made to the Provost within ten business days after the dean's decision. The Provost must make known his or her decision, and reason(s), in writing to the student, the faculty member, chair or program director, dean and review committee within thirty business calendar days. The final authority rests with the Provost.

Academic Dishonesty Incident Report ([catalog.udayton.edu/undergraduate/generalinformation/academicinformation/theacademichonorcode/Academic\\_Dishonesty\\_Incident\\_Report.pdf](http://catalog.udayton.edu/undergraduate/generalinformation/academicinformation/theacademichonorcode/Academic_Dishonesty_Incident_Report.pdf))

## Transcripts

A transcript of the permanent academic record is a confidential document to be released in compliance with the regulations of the Family Educational Rights and Privacy Act of 1974 as amended. The Registrar will issue transcripts upon a request signed by the student provided that no outstanding financial obligation to the University exists. All transcripts so requested require payment in advance. A complimentary transcript voucher will be given to each graduate when the official diploma is issued.

## Undergraduate Students in Graduate Courses

An undergraduate student may register for graduate courses only under the following conditions:

1. Graduate courses to count toward the undergraduate degree:
  - a. Approval must be obtained from the director of the appropriate graduate program.
2. Graduate courses to count toward the graduate degree:
  - a. Approval must be obtained from the director of the appropriate graduate program.
  - b. Unless the student has been accepted into a combined baccalaureate/master's degree program, the student must be within 15 semester hours of completing the semester-hour requirements for graduation in the undergraduate program.
  - c. Credit obtained for the graduate courses may not be counted toward both the bachelor's degree and any future master's degree unless the student has been admitted to a combined Bachelors + Masters program.
  - d. The undergraduate student whose status is less than full-time or 3/4-time must pay the graduate tuition rates to register in graduate courses for graduate credit.

## Libraries and Research Services

The University Libraries are comprised of:

- Marian Library (p. 45)
- Roesch Library (p. 45)
- School of Law Library (p. 45)

Also in this section:

- Access to Other Resources (p. 44)
- International Marian Research Institute (IMRI) (p. 44)
- Literature Searching (p. 44)
- Research Institute (UDRI) (p. 45)
- School of Education and Health Sciences Curriculum Materials Center (p. 45)

## Access to Other Resources

The University Libraries are part of Ohio's OhioLINK project, linking the library resources of over 80 of Ohio's public and private academic and

public libraries, and the State Library of Ohio. A delivery system among these institutions provides rapid delivery of requested materials, usually within three days. The library is an associate member of the Center for Research Libraries, giving it access to hundreds of additional specialized collections. The library is an active member of the Library Division of the Southwestern Ohio Council for Higher Education, which furthers access to regional libraries. Graduate students also have direct, on-site borrowing privileges with all OhioLINK libraries and with nearly all of the Southwestern Ohio Council for Higher Education libraries.

## International Marian Research Institute (IMRI)

Johann G. Roten, S.M., Program Director

The Marian Library/International Marian Research Institute is recognized as the largest and most comprehensive collection of materials on the Virgin Mary and as a leading center for Marian studies. Established in 1943 by the Marianists at the University of Dayton, the Marian Library comprises over 100,000 books and pamphlets which include theological, Scriptural and ecclesial documents and commentaries, biographies of Marian devotees, sermons and Marian art. It also has collections of postcards, religious images, postage stamps, medals, rosaries, Christmas crèches and recordings of Marian music.

A principal mission of the Marian Library is to promote research in Marian studies. The International Marian Research Institute was founded in 1975 (in affiliation with the Pontifical Theological Faculty Marianum in Rome) offering an academic program leading to the licentiate (S.T.L.) and the doctorate (S.T.D.) in theology; the master's degree in religious studies with a Marian concentration (in conjunction with the Department of Religious Studies of the University of Dayton); a certificate in Marian studies; and a guided program of studies. The academic program is organized in a three-year cycle and serves a diverse, international student population: laity (men and women), priests and religious. While most students seek the degree in theology with specialization in Mariology, others simply wish to satisfy personal interests in Marian studies.

The Marian Library provides exhibits of Marian art, reference services, circulation of books and videos, conferences and workshops. Four publications originate at the Marian Library: Marian Library Studies, a scholarly journal of original research; Marian Studies, the journal of the Mariological Society of America; the Marian Library Newsletter, which covers current books and topics of interests; and Art and Spirituality, a series of monographs promoting personal meditation through religious art.

The Marian Library maintains the Mary Page ([catalog.udayton.edu/undergraduate/generalinformation/librariesandresearchservices/internationalmarianresearchinstitute/%20http://www.udayton.edu/mary](http://catalog.udayton.edu/undergraduate/generalinformation/librariesandresearchservices/internationalmarianresearchinstitute/%20http://www.udayton.edu/mary)) with extensive resources: information on art exhibits and classes, Marian ecclesial documents, FAQs and seasonal meditations.

## Literature Searching

Roesch Library subscribes to over 200 databases. These provide information in every area of study offered by the University. Most are available both on and off campus. The library also has access to several hundred additional databases from a variety of commercial database



providers. Librarians work with graduate students and faculty to search these resources when appropriate. There is no charge for this service.

## Marian Library

The Marian Library, located on the seventh floor of the Roesch Library, houses the world's largest collection of published materials on the Virgin Mary. Its comprehensive collection is devoted to information about and references to the Virgin Mary found in works of Scripture, doctrine, history, tradition, art, culture, spirituality and devotion. The multi-language collection includes over 95,000 books and pamphlets (6,000 of which were printed before 1800), 165 periodicals, a clipping file of over 60,000 items and a growing number of microforms. These works are supplemented by a Marian stamp collection, Christmas crèche collection, statues, medals, postcards and other works of art. Publications include Marian Studies (papers given at the annual meeting of the Mariological Society of America), Marian Library Studies (original research on Marian topics) and the twice-yearly Marian Library Newsletter. The Marian Library's collections can be accessed via the University Libraries' online catalog. Hours, an explanatory video and information on current art exhibits can be found on the Mary Page (<http://www.udayton.edu/mary/library>).

## Research Institute (UDRI)

The University includes research as one of its stated purposes. In addition to faculty members in academic departments, a large staff of research scientists, engineers and technicians conduct basic and applied research. Most of these activities are externally funded and are conducted in the laboratories of the University of Dayton Research Institute.

Several hundred students are employed in research programs in accord with the University's emphasis on integration of research and instruction. In addition to financial benefits, this research participation provides students with valuable experience and an exposure to issues at the forefront of contemporary science and engineering.

## Roesch Library

Roesch Library has over 1 million print and electronic books and access to over 68,000 print and e-journals. The library is open 127 hours a week throughout much of the academic year and 24 hours per day during final exams. Research assistance is provided in a variety of forms at the Information or Research Help desks including email, IM, text and telephone. Roesch Library provides computers, printers, copiers and scanners as well as cameras and Kindle e-book readers to borrow. Study spaces have moveable chairs and tables. On the first floor groups may connect laptops to widescreen monitors for easy collaboration. Individual and group study rooms are also available. All floors provide wireless network access for students working on laptops or mobile devices. The Libraries are one of the founding members of OhioLINK, a consortium of Ohio libraries that share resources and provide rapid access to and delivery of over 46 million items available at college and university libraries across the state. Access to the Libraries' Web page, databases, and online catalog (<http://udayton.edu/libraries>).

## School of Education and Health Sciences Curriculum Materials Center

The Brother Louis J. Faerber, S.M., Curriculum Materials Center (CMC) houses the SEHS's specialized education collections and is located on the sixth floor of the College Park Center. Its collection includes professional education books and journals, children and young adult literature, elementary and secondary textbooks, standardized assessments, teaching aids (games & manipulatives), DVD's, CD's, etexts, charts, material kits and other resources. A copier, four networked computer workstations, the Ellison Press, Accu-Cut Machine, and an assortment of letter and shape dies are available for student use.

## School of Law Library

The University of Dayton School of Law Library is located in Joseph E. Keller Hall. Its collection contains over 181,000 volumes and 68,000 physical units of microforms. The open-stack arrangement of the Law Library permits easy access to all materials.

## Interdisciplinary and Special Areas- Undergraduate

In this section:

- Adult Degree Advancement Program (p. 45)
- Air Force Reserve Officers Training Corps (p. 46)
- Cooperative Education (p. 46)
- Core Programs (p. 46)
- Education Abroad (p. 46)
- Experiential Education Programs (p. 48)
- Fitz Center for Leadership in Community (p. 48)
- Information Technology Facilities and Services (p. 49)
- Institute for Pastoral Initiatives (p. 49)
- Interdisciplinary Studies (p. 52)
- Mini Courses (p. 107)
- Office of Educational Services (p. 59)
- Prelaw (p. 59)
- Reserve Officers Training Corps (p. 59)
- Special Programs and Continuing Education (p. 107)
- University Honors Program (p. 59)

## Adult Degree Advancement Program (ADAP)

Specifically designed for students 24 years of age and older who wish to attend college part-time, the University of Dayton Adult Degree Advancement Program (ADAP) allows for completion of the bachelor's degree at a pace that fits nicely with that lifestyle. Day and evening classes are available. Tuition for the ADAP students is very affordable, with cost per credit hour comparable to other adult degree programs.

ADAP students can select from one of six bachelor degree programs:



- Communication Management
- Psychology
- General Studies
- Engineering Technology
- ADA Didactic Program in Dietetics and Early Childhood Education

Information regarding Communication Management, Psychology and General Studies can be obtained from the College of Arts and Sciences, 937-229-2604. Information regarding the Engineering Technology program can be obtained from the Department of Engineering Technology, 937-229-4216. Information regarding the School of Education and Health Sciences programs can be obtained from the Department of Teacher Education, 937-229-3372 or the Department of Health and Sport Science, 937-229-4203.

## Air Force Reserve Officers Training Corps (AFROTC)

Air Force Reserve Officers Training Corps (AFROTC) is designed to create future leaders for the United States Air Force. The program is based out of the host school at Wright State University but classes are conducted on the University of Dayton campus to alleviate any transportation concerns. A wide range of scholarships-to include full tuition-are available to qualified students.

## Cooperative Education (COP)

Cooperative education is an optional plan of full-time, on-campus study alternating with terms of full-time, off-campus paid work experience in industry, business or government. Among the expected benefits to the student are on-the-job experience, career identification, financial assistance and professional development. The work terms average seventeen weeks. Three full work terms are considered minimum for the program. Students are encouraged to begin their first co-op work experience after their third or fourth semester of academic study. Placement in a job is not guaranteed since it depends on the student's qualifications and on the availability of jobs.

### College of Arts and Sciences & School of Business Administration

Cooperative Education is open to all students in the College of Arts and Sciences and the School of Business Administration. These students may start the application process by making an appointment with a career services professional. Further information on the cooperative education program for arts, science, and business students may be obtained by contacting Career Services, University of Dayton, Dayton, OH 45469-2711; phone (937) 229-2045; website (<http://careers.udayton.edu>).

### School of Engineering

Qualifications for entering and remaining in cooperative education are (1) to be admitted to the University as a full-time undergraduate student with a minimum cumulative grade point average of 2.3; (2) to have a declared major in one of the academic departments in Engineering or Engineering Technology; (3) to maintain good academic standing as specified by the particular academic department; (4) to engage in full-time study and make progress toward the degree during each study term following each full-time work training term.

Incoming sophomore, junior level or transfer students interested in cooperative education should attend one of the seminars held in September and January of each year. After each Co-op New Student

Seminar, such students may begin the process of entering the program, which includes registering through the Hire a Flyer network and having an initial interview with a member of the co-op staff. Those who start as first-year students at the University are eligible for placement after completing three terms of full-time study on campus. Transfer students, whether from two-year or four-year institutions, must spend one full-time study term on campus after transferring before becoming eligible for the first work term.

Further information on the engineering cooperative education program may be obtained by contacting Cooperative Education, School of Engineering, University of Dayton, Dayton, OH 45469-0227; phone (937) 229-2335; website (<http://engineering.udayton.edu/careers/coop.asp>).

## Core Programs

The University of Dayton's Core Program offers an innovative, interdisciplinary two and one-half year curriculum that stresses the connections between disciplines while at the same time fulfilling many of the University's Common Academic Program Requirements. These interdisciplinary courses – in the humanities, arts and social sciences – address a common theme, "Human Values in a Pluralistic Culture," and are carefully coordinated so that students experience the integrated character of the liberal arts. Extra-curricular speakers, arts events and other activities related to course content are an important part of the program.

The Core Program accepts 80-100 students each year from across all of the University's four undergraduate schools -- the College of Arts and Sciences, the School of Business Administration, the School of Education and Health Sciences, and the School of Engineering. All entering first-year students are invited to apply; students in some majors in the College of Arts and Sciences are enrolled automatically. Core is designed to deepen the learning experience of any interested University of Dayton student.

While Core is not an accelerated or honors program, students can receive 15 semester hours of honors credit for completing the Core Program. Core is a strong academic program and students in the program receive much support in the form of highly committed faculty and in the form of Core Research Assistants, Core Fellows (Teaching Assistants for first-year students) and the Core House in the student neighborhood.

## Education Abroad

The Education Abroad office, located in the Center for International Programs, guides students pursuing an educational experience outside the United States. Whether the student wishes to attend a program through the University of Dayton or through another institution, our education abroad staff assist with the application process and prepares students through a pre-departure orientation. The education abroad staff also offer a re-entry program to students returning to the U.S.

A variety of international education programs are available through the University of Dayton, including summer, semester and full-year study abroad programs; international service opportunities and work experiences; and intercultural programming.

### Summer Faculty-Led Study Abroad Programs - Interdisciplinary

Summer Faculty-Led Study Abroad Programs, offered through the Center for International Programs (CIP), are a unique study and travel experience. Students choose from eight to twelve sites during the months

of May, June and July, and spend approximately three to five weeks at each program site. While abroad, students select courses from a variety of disciplines and use on-site resources to guide and enhance their learning experience. Typically, courses are taught by University of Dayton professors. By choosing to study at two different sites for a total of 6-10 weeks, students can earn up to a full semester of credits. Past sites have included Athens, Dublin, Florence, London, Madrid, Paris, Rome and Shanghai.

### **Summer Faculty-Led Study Abroad Programs - Disciplinary**

Students may also participate in a Summer Faculty-Led Study Abroad Program to focus on a particular area of study. These programs are offered on a regular basis. Past summer options included programs in business, communications and psychology.

Language majors or minors can develop their spoken and written foreign language skills through summer language immersion programs. Students can improve their foreign language skills while integrating personal experiences and discoveries with material discussed in class lectures. University of Dayton professors design the courses to incorporate contemporary use of the language and explore the culture, government, and history of the city and nation in which they are teaching.

### **Semester/Academic-Year Education Abroad**

The University of Dayton has developed partnerships and participates in exchange agreements with several overseas institutions. In addition to University of Dayton tuition, students are responsible for their room and board in the host country, international travel, and personal expenses. Most financial aid (including institutional scholarships and grants) applies to exchange programs.

### **Other Opportunities**

University of Dayton students can study abroad in many countries through other U.S. colleges and universities, and study abroad organizations or overseas universities. In addition to tuition, students are responsible for room and board in the host country, international travel and personal expenses. Aid for non-University of Dayton sponsored programs is limited to federal loans and grants. Through these programs, University of Dayton students can study in Argentina, Australia, Austria, China, Costa Rica, the Czech Republic, France, Hungary, Ireland, Italy, Mexico, Poland, Russia, South Africa, Spain, the United Kingdom and many other countries.

### **Service Abroad**

The Center for Social Concern offers opportunities for students to combine service-learning with their education abroad experience. The International Summer Immersion programs introduce students to the country's way of life through job placements, interaction with host families and travel through the country. Past destinations have included India, Cameroon and Guatemala. The Center for Social Concern also coordinates week-long international service programs during the University's winter break.

ETHOS offers various service opportunities in cities within Latin America, Africa, India, China and Bangladesh, as well as domestic placements. Through ETHOS International Service Learning Placements, students participate in an 8- to 16-week service-learning internship. These internships involve working with NGOs or cottage industries doing engineering- and/or business-related work. The program is operated through the School of Engineering and open to both engineering and business majors. Students from other majors may participate by permission.

### **Release Agreement and Travel Registration**

All students participating in a university-sponsored international program must complete the Release and Agreement Form which releases the University from liability for claims including, but not limited to, injury, delay and damage while abroad. As part of this agreement, the student agrees to abide by the University's standards of behavior while in the host country or countries. Students are also required to complete the Health Information and Emergency Treatment Authorization Form which requests medical information and the Behavioral Contract which outlines the institution's expectations for behavior while abroad. Depending on the program, students may need to complete the Authorization Form in order to transfer academic credit earned as part of a study abroad program to the University of Dayton.

Additionally, all University of Dayton students participating in a university-sponsored international program are required to complete the online Travel Registry as part of their pre-departure requirements. The University-wide travel registry allows the University to remain in close contact with students, should they need assistance while abroad. In addition to the Travel Registry, all students participating in an individual exchange or non-University-sponsored program are required to register with the U.S. State Department.

### **International SOS**

The University of Dayton has contracted with International SOS (SOS) to provide worldwide medical, travel and security assistance and evacuation services for all faculty, staff and students participating in university-related international travel. Services include up-to-date reports on safety and security, health issues, medical referrals and vaccination requirements for individual countries. SOS offers our students travel, medical and security advice and services and protects against a variety of difficulties that could arise while abroad; however, the SOS is NOT health insurance. The University of Dayton continues to require all students studying abroad to maintain adequate health insurance coverage while overseas and expects students to ensure that their policies cover them, and any specific personal issues, while abroad.

### **High Risk Travel**

The university will not provide funding for undergraduate students partaking in individual travel, research, study or other university-related business in countries or specific areas within countries for which either the Department of State (DOS) or Center for Disease Control (CDC) has issued a Travel Health Warning. If a warning is issued after the program is underway, the University's International Response Team (IRT) will review each situation on a case-by-case basis to determine the appropriate course of action. Refunds will be evaluated on a case-by-case basis and may depend on specific service-provider refund policies.

For individual travel by students who have University funding to pursue research, study or other University-related business in countries or specific areas within countries for which the DOS has issued a Travel Health Warning, or the CDC has issued a Travel Health Warning, the University will not provide funding for undergraduates. Also, the University will not provide support for faculty, staff or graduate/professional students in a country where a mandatory evacuation order has been issued. The University will review on a case-by-case basis requests for waivers (see waiver requests below).

If a warning is issued after the program is underway, the University will review each situation on a case-by-case basis to determine the appropriate course of action. In general, the University will not require the traveler to reimburse already expended funds. However, the University

reserves the right to terminate remaining funding. Should a traveler have concerns and decide to return home based on lower-level travel warnings, the University will not require the traveler to reimburse expenses already incurred.

**Travel Waiver Requests:** Requests for a travel waiver will be considered under limited circumstances. Waiver requests should be submitted to the Center for International Programs and include a description of the learning, service and/or research objectives of the trip; the importance of the program to the educational, research, service or professional development of the group or individual; the political and physical conditions at the proposed site that could impact health and safety; the level of risk to the individual or group health and safety, including the traveler(s) knowledge of the area and conditions; a description of travel conditions within the country and an evacuation plan should it become necessary; and a signed High Risk Travel Waiver/Release for each traveler.

In addition to review of the warnings in question and the required waiver, the University's CIP will seek to obtain information regarding the actions of U.S. companies and organizations in country. The CIP will also consult with relevant country experts at International SOS or other relevant organizations in country to obtain additional information and advice on the situation. IRT members will have the opportunity to review the waiver application along with the additional information collected by the CIP and provide input. An IRT waiver review subcommittee will make the final decision regarding travel waivers. There is no appeal process for waivers that are denied.

### Additional Considerations

Additional travel restrictions are imposed and enforced by the United States Treasury Department's Office of Foreign Assets Control (OFAC). Please check the following website to identify if your travel to or business with foreign countries is on the list of excluded countries and notify CIP should you identify your country on the sanctioned list.

U.S. Department of the Treasury website: <http://www.treasury.gov/resource-center/sanctions/Programs/Pages/Programs.aspx>

The CIP will consult with appropriate University departments and review on a case by case basis whether such travel may go forward.

## Experiential Education Programs (EXP)

Experiential Learning is an optional part-time or full-time internship work experience, either paid or unpaid, in industry, business or government directly related to a student's major or career path. Among the expected benefits to the student are on-the-job experience, career exploration or identification, financial assistance and professional development. The work terms can be part-time during semesters while attending classes and/or full-time during semesters not taking classes. Students may begin an Experiential Learning internship work experience as early as the summer after their first year of study. Jobs may be found with the assistance of Career Services through Hire a Flyer, an academic department or a student may find a position on their own. Experiential Learning is open to all students. Students may start the application process by making an appointment with a career services professional prior to beginning work. Further information may be obtained by contacting Career Services, University of Dayton, Dayton, OH

45469-2711; phone (937) 229-2045; website (<http://www.udayton.edu/careerservices>).

## Fitz Center for Leadership in Community

The mission of the Fitz Center for Leadership in Community is to initiate and sustain partnerships with urban neighborhoods and larger communities for comprehensive community building and to provide a context for connected learning and scholarship. The Fitz Center's vision is for the University of Dayton to become a national leader in the education of community builders - including students, faculty, staff and alumni - through their participation in community building partnerships. Grounded in Catholic social teaching and Marianist ideals, the Fitz Center stimulates, coordinates and facilitates learning and scholarship on leadership that builds and sustains community.

The Fitz Center builds on the University's and the Marianists' long experience of linking University resources to those of the Dayton community to solve regional problems, develop community leaders and build neighborhoods and nonprofits. Through the Fitz Center, the University has built collaborative relationships with dozens of neighborhood, community, nonprofit and local government organizations and associations in efforts that have enriched the quality of life for thousands of citizens within Dayton and surrounding communities. These projects also have afforded meaningful learning opportunities to hundreds of students and dozens of faculty members annually.

The Fitz Center represents a different way of learning, one that is based in practical reasoning and democratic civic engagement; a different way of seeing and understanding the urban community as a social ecology of children, families, neighborhoods and systems; a different way of designing and implementing change using a model of comprehensive community building based on assets, not needs; and a different way of leading focused on adaptive leadership through constructive conversation that balances inquiry and advocacy. The Center also emphasizes the importance of relationships and the necessity of widely shared vision to move communities forward. These basic convictions guide planning and program development. They also build on the extensive community experiences of the Fitz Center staff.

The Fitz Center for Leadership in Community has four primary functions. These functions are carried out by teams of students, faculty, and Fitz Center staff working in partnership with neighborhood and community leaders. They are:

- Initiate and sustain partnerships.
- Develop communities of reciprocal learning, scholarship, and practice.
- Develop curricular and co-curricular innovations around leadership in community.
- Build university and community capacity for constructive deliberation and change.

The Fitz Center educates leaders who build and sustain communities. The Center offers the following opportunities for learning about and experiencing leadership in community:

- Community Engaged Learning
- Leadership in Building Communities seminar
- Semester of Service

- Rivers Institute and River Stewards
- River Leadership Curriculum
- Annual River Summit
- Dayton Civic Scholars
- Community Assets Bus Tours
- Annual CityLinks Neighborhood Conference
- Dayton's Neighborhood School Centers
- Fr. Ferree Professor of Social Justice
- Research and evaluation

The Fitz Center provides an interdisciplinary minor in family development within the College of Arts and Sciences. It also conducts research on a broad range of contemporary family and community issues and offers opportunities for the development of social science research skills through tutorials and participation in its ongoing research projects. The Center serves as a resource to local governmental, health, religious, educational and social service agencies by evaluating programs and developing solutions to the problems of families and the communities in which they live. The Fitz Center is committed to an integrated perspective on families and communities that draws on multiple disciplines. For more information on this minor, visit FDV in Academic Information. The Fitz Center also houses the research division of the Montgomery County Office of Family and Children First. This office is available to assist students and faculty interested in local human services issues.

The Society of Mary supports the Ferree Professor of Social Justice in the Fitz Center. Marianist Provincial Father William Ferree was recognized as a key spokesperson on the Catholic theory of social justice. The Ferree Professor connects Catholic social teaching to the social sciences and other disciplines through the community-building mission of the Center.

The nature of the leadership challenges in the Dayton community requires adaptive learning and leadership across professional and community sectors. The University of Dayton has established a reputation as an effective community partner, especially with urban Dayton on difficult community challenges. The University of Dayton adds value to the community through the Fitz Center as it brokers and leads ongoing community building partnerships.

## Information Technology Facilities and Services

As one of the nation's premier institutions for technology-enhanced learning, the University of Dayton views information technology as central to both the living and learning experiences of students. UD has one of the most distinctive wired campuses in the nation: residence halls, as well as the 25 city blocks of UD owned houses comprising the Student Neighborhood, are equipped with high-speed data connections for each student. The University also supports more than 950 wireless access points to provide wireless coverage in most areas on campus, including academic buildings. In addition, students have access to an array of on-campus computer labs and computer-equipped classrooms.

To leverage this high-performance digital community, UD requires all incoming students to have a notebook computer that meets minimum hardware and software requirements set forth by each academic area. UD provides software such as Microsoft Office, SPSS, SAS and Symantec AntiVirus to support learning, communication and collaboration within and beyond the classroom.

The technology infrastructure at UD includes a gigabit network backbone with over 150 servers. In addition to maintaining this robust infrastructure, UD also supports learning and collaboration through such operations as the Help Desk, IT Training, and e-Learning. Students at the University of Dayton are encouraged to become highly proficient in using the tools of the information age as they prepare for their chosen careers.

## Institute for Pastoral Initiatives

The Institute for Pastoral Initiatives mobilizes the resources of the University of Dayton for partnerships with the church that create and implement innovative pastoral initiatives designed to meet the needs of the church and to articulate faith within the context of contemporary culture.

The Institute co-directs the unique Forum for Young Catechetical Leaders for students. The FORUM prepares students to be certified to become catechists in the Catholic Church. Students are introduced to outstanding catechetical leaders from around the country. Each semester students gather one Saturday a month for a full day of catechetical formation. This is the only such program in the USA in a Catholic University.

The Virtual Learning for Faith Formation -online courses- is coordinated by the Institute. Courses are offered for CEUs to support Catechist, Youth Ministry and Lay Ecclesial Leadership Formation.

The Institute's overall mission is to reflect the Catholic Marianist identity of the University through education, consultative services, networking, applied pastoral research and multimedia catechetical productions and publications.

The Institute is currently focusing on research and teaching in the following areas:

1. The Forum for Young Catechetical Leaders
2. The Virtual Learning Community for Faith Formation (Internet)
3. Lay Ecclesial Leadership Formation
4. Religion, Spirituality and Film
5. Pastoral Communications and Ministry
6. New Paradigms for Adult Faith Formation
7. Advocacy for Persons with Disabilities within the Church

## Inst for Pastoral Int-Marianist Courses

**IPM 220. Marianist Studies: Founders of the Marianist Family. 1 Hour**  
Historical context and life of Father William Joseph Chaminade and other Marianist founders, especially Adele de Batz de Trenquellion and Marie Therese de Lamourous.

**IPM 221. Community. 1 Hour**  
Exploration of the key theological principles for understanding the meaning and formation of community within the Marianist spirit.

**IPM 222. Marianist Studies: Spirituality. 1 Hour**  
Examination of the cultivation of a life of prayer informed by Marianist spiritual traditions, particularly the role of Mary and the commitment to permanent Marianist mission.

**IPM 223. Marianist Studies: Prayer. 1 Hour**  
MARIANIST STUDIES: PRAYER An exploration of Father William Joseph Chaminade's methods and practices of prayer with insights for individual and group prayer.



**IPM 224. Marianist Studies: Social Justice. 1 Hour**

An exploration for integrating the insights of Father William Joseph Chaminate with the realities of modern life in envisioning a Marianist approach to social change for the twenty-first century.

**IPM 225. Marianist Studies: Leadership. 1 Hour**

Exploration of how to integrate excellent leadership skills with goals and principles of the Marianist mission. Designed for those invited to hold leadership roles in the Marianist family.

**IPM 226. Marianist Studies: Charism. 1 Hour**

Exploration of the concept of charism focusing on the Marianist charism. Emphasis on the principles and practices of Marianist spirituality, the Marianist apostolate and its importance in forming Marianist life, and the real and potential impact of the Marianist mission on the wider Church and global community.

**IPM 227. Marianist Studies: Education. 1 Hour**

Advanced course in Marianist education based on a basic understanding of the Characteristics of Marianist Education (CMEs). Emphasis on the manner in which Marianist education interweaves instruction with development of persons committed to Fr. Chaminate's mission to educate in the faith and to multiply Christians.

**IPM 228. Marianist Studies: Mary. 1 Hour**

Survey of the roles Mary has which make her a model for believers to follow: believer, prophet, God-bearer/mother, disciple, and companion. Special attention is given to the events of her life and the life of her son Jesus. Prerequisite(s): (IPM 220, IPM 221) or permission of instructor.

## Inst for Pastoral Int Courses

**IPI 100. Survey of Catholic Doctrine. 1 Hour**

Comprehensive survey of Catholic doctrine which systematically follows the structure of the Nicene-Constantinopolitan Creed. Prerequisite(s): Permission.

**IPI 121. Conscience. 1 Hour**

The steps, stages of development, and concepts concerning moral decision making as practiced within the context of the Roman Catholic faith. Prerequisite(s): IPI 100 or permission of instructor.

**IPI 130. Introduction to Scripture. 1 Hour**

An introductory overview of Christian scripture that is foundational for Old and New Testament online courses.

**IPI 131. Introduction to Old Testament. 1 Hour**

Study of contemporary Old Testament studies to learn how to read a biblical text in terms of its literary qualities and cultural influences on interpretations. Prerequisite(s): REL 210.

**IPI 132. Introduction to New Testament. 1 Hour**

Introduction to the New Testament with a focus on the text's cultural contexts, literary composition, theological themes, and pastoral applications. Prerequisite(s): REL 211.

**IPI 180. Faith & Human Development. 1 Hour**

Study of the development of Christian spirituality as part of human moral and psychological development. Prerequisite(s): Permission.

**IPI 210. Introduction to Prayer. 1 Hour**

Introduction to the nature and types of prayer understood and practiced in Scripture and the theological and liturgical tradition of the Roman Catholic Church. Prerequisite(s): IPI 100 or permission of instructor.

**IPI 211. Prayer with Children. 1 Hour**

Survey of how children develop spiritually and the best practices for teaching children techniques in prayer and developing their spiritual life. Prerequisite(s): IPI 100 or permission of instructor.

**IPI 212. Introduction to Liturgy. 1 Hour**

Introduction to the public and communal worship of the Church, its purpose and features, with special attention paid to the Mass and the Liturgy of the Hours. Prerequisite(s): IPI 100 or permission of instructor.

**IPI 220. Catholic Social Teaching. 1 Hour**

Survey of the foundations and key themes of the social teaching of the Roman Catholic Church. Prerequisite(s): IPI 100 or permission of instructor.

**IPI 225. Ecclesiology: The Beginnings of the Church. 1 Hour**

Introduction to the theological study of the Church, including basic terms and concepts essential for understanding the Church's nature, mission, and historical evolution. Prerequisite(s): REL 212.

**IPI 226. Ecclesiology: The Pilgrim Church. 1 Hour**

Exploration of how the Church maintains its continuity with Jesus and reshapes its own self-understanding, focusing on how the Church continually reconstitutes itself through its decisions in meeting the challenges of each age. Prerequisite(s): REL 240.

**IPI 227. Ecclesiology: Reframing Church. 1 Hour**

Focus on the Second Vatican Council as a whole with specific consideration of the Council's teachings regarding liturgy, Scripture, hierarchy, laity, and the Church's relationship with the world. Prerequisite(s): REL 241.

**IPI 228. Mary Holy Possibility. 1 Hour****IPI 229. Introduction to Islam. 1 Hour**

The origin, development and spread of Islam is surveyed, followed by the study of the basics of this religion, including major practices and beliefs, the role of the Quran, perspectives on gender roles and how Islam views people of other faiths. Consideration will also be given to factors that give rise to either fundamentalist or democratic movements in the Muslim world. Prerequisite(s): IPI 100 or permission of instructor.

**IPI 250. Church History I. 1 Hour**

Survey of the origin and development of the Roman Catholic Church from the apostolic era through the Protestant and Catholic Reformation, with a focus on key events and personalities. Prerequisite(s): IPI 100 or permission of instructor.

**IPI 251. Church History II. 1 Hour**

Survey of the origin and development of the Roman Catholic Church from the Reformation era to the post-Vatican II era with a focus on key events and personalities. Prerequisite(s): (IPI 100, 250) or permission of instructor.

**IPI 253. History of Catholic Social Action. 1 Hour**

An introduction to official Catholic Church documents on social teaching and how Catholic activism around the world has influenced these teachings. Prerequisite(s): REL 262.

**IPI 254. United States & World Poverty. 1 Hour**

Analysis of conditions, causes, and trends of poverty in the U.S. and abroad and responses through the theological lens of Catholic social teaching. Prerequisite(s): REL 260B, 263.

**IPI 260. Introduction to Catechesis. 1 Hour**

Exploration and analysis of the purpose, methods, goals, tasks and essential content of catechesis.

**IPI 300. Christology. 1 Hour**

Survey of the origins and development of the foundational doctrines and theology concerning the identity, work, and mission of Jesus Christ. Prerequisite(s): IPI 100 or permission of instructor.



**IPI 301. Mary. 1 Hour**

Survey of the place the Virgin Mary occupies in the history of salvation and in the Church's life. Prerequisite(s): IPI 100 or permission of instructor.

**IPI 302. Sacraments. 1 Hour**

Survey of the history, theology, pastoral and liturgical practice of the sacraments of the Roman Catholic Church. Prerequisite(s): IPI 100 or permission of instructor.

**IPI 303. Sacraments of Initiation. 1 Hour**

The history, theology, pastoral and liturgical practice of the sacraments of Baptism, Confirmation, and Eucharist.

**IPI 304. Sacrament of Marriage. 1 Hour**

The history, theology, official teaching, pastoral and liturgical practice of the Sacrament of Matrimony according to the Roman Catholic Church. Prerequisite(s): IPI 100 or permission.

**IPI 400. Advanced Catholic Social Teaching. 1 Hour**

Detailed discussion of the principles and recurring themes of Catholic Social Teaching according to papal social encyclicals and other documents. Prerequisite(s): (IPI 100, 220) or permission of instructor.

**IPI 435. Scripture & Justice. 1 Hour**

Exploration of Old and New Testament foundations for Catholic social teaching and social action.

**IPI 450. Vocation Ministry. 1 Hour**

Basic principles of ministry in the Church are introduced, according to guidelines outlined in the United States Conference of Catholic Bishops' National Certification Standards for Lay Ecclesial Ministers. Prerequisite(s): IPI 477 or permission of instructor.

**IPI 451. Communication & Community. 1 Hour**

Explores principles and techniques for effective communication in varied kinds of parish and diocesan ministry. Prerequisite(s): (IPI 450, 477) or permission of instructor.

**IPI 452. Collaboration in Community. 1 Hour**

Study of techniques of effective collaboration with others in ministry and the identification and overcoming of obstacles to collaboration. Prerequisite(s): (IPI 450, IPI 451, IPI 477) or permission of instructor.

**IPI 453. Pastoral Culture. 1 Hour**

Survey of the theories and concepts related to culture, the ethnic groups that make up the Catholic Church in the United States of America, and the skills needed to begin to work effectively in a multicultural parish community or other Catholic ministry setting. Prerequisite(s): (IPI 450, IPI 451, IPI 452, IPI 477) or permission of instructor.

**IPI 454. Leadership Ministry. 1 Hour**

Survey of the principles, strategies, and best practices of the exercise of leadership and management within the context of Church ministry. Prerequisite(s): (IPI 450, IPI 451, IPI 452, IPI 453, IPI 477) or permission of instructor.

**IPI 455. Administrative Ministry. 1 Hour**

Survey of the essential skills of management and supervision in Church ministry, including the spiritual dimension necessary for the effective exercise of those skills. Prerequisite(s): (IPI 450, IPI 451, IPI 452, IPI 453, IPI 454, IPI 477) or permission of instructor.

**IPI 456. Church Living System. 1 Hour**

Integration of the principles, best practices, and skills needed for effective lay ministry leadership in the Church. Prerequisite(s): (IPI 450, IPI 451, IPI 452, IPI 453, IPI 454, IPI 455, IPI 477) or permission of instructor.

**IPI 460. Foundations & Vision for Adult Learning & Faith Formation. 1 Hour**

Exploration and analysis of the principles, tasks, and goals of adult faith formation within the larger context of lifelong catechesis. Prerequisite(s): IPI 477 or permission of instructor.

**IPI 461. Parish as a Learning Community. 1 Hour**

Examination of the parish as a learning community in order to facilitate adult faith formation. Content includes the study of the dynamics and stages of community and group development, the characteristics of a learning community, and the development of strategies for the formation of the parish as a learning community. Prerequisite(s): IPI 460 or permission of instructor.

**IPI 462. Many Faces of Adult Learners. 1 Hour**

Examination of the intellectual and spiritual capacities and experiences which constitute adult learning and faith formation. Prerequisite(s): IPI 461 or permission of instructor.

**IPI 463. Facilitating Adult Learning & Faith Formation. 1 Hour**

Examination of the foundations, principles, and strategies for effective adult learning and facilitation of adult learning and faith formation for all stages of adulthood. Prerequisite(s): IPI 462 or permission of instructor.

**IPI 464. Leadership Roles & Skills for Adult Learning & Faith Formation. 1 Hour**

Study and development of leadership and team development skills for adult learning and faith formation, including skills in collaboration, forming and empowering others for roles in adult learning and faith formation, learning how to facilitate effective meetings, learning effective methods of communication in groups, dealing with conflict, and developing ways for leaders to create a balanced approach to Christian life. Prerequisite(s): IPI 463 or permission of instructor.

**IPI 465. Spirituality in Adult Learning & Faith Formation. 1 Hour**

Exploration of the defining spirituality, and the principles, techniques, and goals required for an authentic spiritual life in the specific context of adult faith formation. Content also includes a survey of the different schools of spirituality within Catholic tradition. Prerequisite(s): IPI 464 or permission of instructor.

**IPI 466. Designing & Implementing Adult Learning & Faith Formation. 1 Hour**

Presentation and analysis of the principles, tasks, and goals of adult faith formation within the larger context of lifelong catechesis. Prerequisite(s): IPI 465 or permission of instructor.

**IPI 477. Vocation, Spirituality & Discipleship of Catechists. 1 Hour**

Exploration and analysis of the vocation, spirituality, and discipleship of catechesis. Prerequisite(s): IPI 260 or equivalent.

**IPI 480. A Vision for Catholic Youth Ministry. 1 Hour**

Introduction to the themes, principles, components, and goals to construct successful Catholic youth ministry programs according to guidelines outlined in the US Conference of Catholic Bishops pastoral plan, *Renewing the Vision*. Prerequisite(s): IPI 477 or permission of instructor.

**IPI 481. Relational Ministry with Youth. 1 Hour**

Exploration and analysis of the relationships youth have with their parents, youth ministers, and the parish community as a whole. Prerequisite(s): IPI 480 or permission of instructor.

**IPI 482. Prayer & Worship with Adolescents. 1 Hour**

Study of pedagogical practices to help young people make prayer a central and regular habit of their lives. Prerequisite(s): IPI 481 or permission of instructor.

**IPI 483. Principles for Addressing Diversity Issues in Youth Ministry. 1 Hour**

Survey of best practices for developing effective youth ministry programs for young people from plural backgrounds and environments. Prerequisite(s): IPI 482 or permission of instructor.

**IPI 484. Planning Youth Ministry. 1 Hour**

Survey of the common factors and best practices that contribute to effective planning for youth ministry. Prerequisite(s): IPI 483 or permission of instructor.

**IPI 496. Parish & Social Action. 1 Hour**

Exploration of the roots of the parish's social mission in Scripture and Catholic social teachings. Prerequisite(s): REL 260B, 263.

## Interdisciplinary Studies

All interdisciplinary and experimental studies at the University of Dayton must involve University students and faculty, must be commensurate with University resources or resources accessible to the University and must further the recognized goals and purposes of the University. When these studies involve disciplines within the College of Arts and Sciences or one of the Schools, they are administered by or through the offices of the respective deans. When they are University-wide, i.e., inter-school, they are usually administered by the Office of the Provost.

### Interdisciplinary-AS Courses

**ASI 100. Academic Reading & Dialogue. 3 Hours**

Academic Reading and Dialogue.

**ASI 110. Development of Western Culture in a Global Context. 7 Hours**

An introductory two-course sequence integrating the study of English, history, philosophy and religious studies. The first course, ASI 110 (7 sem. hrs), offered in the fall semester, covers ancient civilizations through early modern civilization. (Completion of ASI 110 counts as completion of HST 103 and REL 103.)

**ASI 120. Development of Western Culture in a Global Context. 8 Hours**

An introductory two-course sequence integrating the study of English, history, philosophy and religious studies. The second, course, ASI 120, (8 sem. hrs), offered in the spring semester, continues from the Enlightenment to the contemporary period. Restricted to first-year students in the Core Program. (Completion of ASI 120 counts as completion of second historical study course, PHL 103, and ENG 200H.) Prerequisite: ASI 110.

**ASI 150. Introduction to the University Experience. 1 Hour**

Examination of the values that inform academic progress in the College; discussion of strategies for taking full advantage of academic opportunities and integrating formal and experiential learning.

**ASI 201. Personal Value Development. 2 Hours**

Exploration of the conceptual framework of value development. Application of concepts in such personal decision making as educational and career planning, developing satisfying personal relationships, and using time productively.

**ASI 203. The Dayton Community. 3 Hours**

An interdisciplinary social science course describing and analyzing the nature of community issues and problems of the Dayton area; various approaches to addressing local concerns including public, private and citizens initiatives are explored.

**ASI 214. Dramatic Kinesics in a Foreign Language. 1 Hour**

Corrective work in foreign language sound and gesticulatory patterns accomplished by enacting scenes from a play in the language. May be repeated in one language in successive stages of difficulty up to three semester hours. Registration may be retroactive. Prerequisite(s): Basic instruction in language; permission of instructor.

**ASI 228. Focus on Women. 1 Hour**

Interdisciplinary seminar on the changing roles and status of women. Requirement for women's studies minors. May be repeated since topics change yearly.

**ASI 301. Democracy & Deliberation. 3 Hours**

Democracy & Deliberation explores competing theoretical approaches to and empirical assessments of democratic governance. Particular attention is paid to the role of deliberation and civic engagement in democracies. Students will help organize and execute a deliberative forum as part of the course.

**ASI 301H. Democracy & Deliberation. 3 Hours**

Democracy & Deliberation explores competing theoretical approaches to and empirical assessments of democratic governance. Particular attention is paid to the role of deliberation and civic engagement in democracies. Students will help organize and execute a deliberative forum as part of the course.

**ASI 305. Appalachian Studies. 3 Hours**

Appalachian history and its influence on the present; problems of recent events; influence of local government and federal programs on the people; economic problems of underprivileged people and the future of industrial development; ecology of the region; literature, art, and music; psychology of social change and community development in the underdeveloped regions; health and mental health; problems of the Appalachian migrant.

**ASI 320. Cities & Energy. 3 Hours**

An interdisciplinary examination of the influence of energy on the urban environment since the Industrial Revolution, how this relationship has affected every aspect of city life from culture to infrastructure, and prospects for the future of this relationship.

**ASI 320H. Cities & Energy. 3 Hours**

An interdisciplinary examination of the influence of energy on the urban environment since the Industrial Revolution, how this relationship has affected every aspect of city life from culture to infrastructure, and prospects for the future of this relationship.

**ASI 322. Cities & Suburbs: The Influence of Place (Social Science). 3 Hours**

This interdisciplinary course examines the changing social, political, economic, cultural, ethical, and religious factors that shape life in cities and suburbs. It examines the factors that influence where people choose to live and the conditions that both unite and divide people across urban/suburban regions. Particular consideration is given to issues of social injustice, privilege and oppression, and moral responsibility. The social science domain is emphasized. This course is cross-listed with ASI 323 and ASI 324. Students taking ASI 322 may not receive credit for ASI 323 or ASI 324.

**ASI 323. Cities & Suburbs: The Influence of Place (Philosophy). 3 Hours**

This interdisciplinary course examines the changing social, political, economic, cultural, ethical, and religious factors that shape life in cities and suburbs. It examines the factors that influence where people choose to live and the conditions that both unite and divide people across urban/suburban regions. Particular consideration is given to issues of social injustice, privilege and oppression, and moral responsibility. The philosophy domain is emphasized. This course is cross-listed with ASI 322 and ASI 324. Students taking ASI 323 may not receive credit for ASI 322 or ASI 324.

**ASI 324. Cities & Suburbs: The Influence of Place (Religious Studies). 3 Hours**

This interdisciplinary course examines the changing social, political, economic, cultural, ethical, and religious factors that shape life in cities and suburbs. It examines the factors that influence where people choose to live and the conditions that both unite and divide people across urban/suburban regions. Particular consideration is given to issues of social injustice, privilege and oppression, and moral responsibility. The religious studies domain is emphasized. This course is cross-listed with ASI 322 and ASI 323. Students taking ASI 324 may not receive credit for ASI 322 or ASI 323.

**ASI 325. Cities & Institutions. 3 Hours**

Examination of important urban institutions, including, but not limited to, city planning, economic development, public safety, and education.

**ASI 341. Special Topics in Arts Study. 1-3 Hours**

Examination of an interdisciplinary topic in arts study. Topics developed by faculty holding appointment in the Humanities Fellows Program or in an endowed chair. Specific topics may be used to meet thematic cluster general education requirements. May be repeated as topics change.

**ASI 342. Special Topics in Historical Study. 1-3 Hours**

Examination of an interdisciplinary topic in historical study. Topics developed by faculty holding appointment in the Humanities Fellows Program or in an endowed chair. Specific topics may be used to meet thematic cluster general education requirements. May be repeated as topics change.

**ASI 343. Special Topics in Philosophy Study. 1-3 Hours**

Examination of an interdisciplinary topic in philosophy. Topics developed by faculty holding appointment in the Humanities Fellows Program or in an endowed chair. Specific topics may be used to meet thematic cluster general education requirements. May be repeated as topics change.

**ASI 344. Topics in Religious Studies. 1-3 Hours**

Examination of an interdisciplinary topic in religious studies. Topics developed by faculty holding appointment in the Humanities Fellows Program or in an endowed chair. Specific topics may be used to meet thematic cluster general education requirements. May be repeated as topics change.

**ASI 345. Special Topics in Social Science. 1-3 Hours**

Examination of an interdisciplinary topic in social science. Topics developed by faculty holding appointment in the Humanities Fellows Program or in an endowed chair. Specific topics may be used to meet thematic cluster general education requirements. May be repeated as topics change.

**ASI 346. Special Topics in Physical & Life Science. 1-3 Hours**

Examination of an interdisciplinary topic in physical and life sciences. Topics developed by faculty holding appointment in the Humanities Fellows Program or in an endowed chair. Specific topics may be used to meet thematic cluster general education requirements. May be repeated as topics change.

**ASI 347. Physics & Literature. 3 Hours**

Examination of works of literature that are based on principles of physics. Basic physics experiments will be performed to reinforce theoretical principles. Prerequisite(s): ENG 102 or equivalent; SCI 190 or other PHY course.

**ASI 350. Interdisciplinary Film Study. 1 Hour**

A capstone course in the film studies minor. Interdisciplinary study of film from religious, philosophical, literary, creative, technological and institutional perspectives. Requirement for film studies minors. Prerequisite(s): Any combination of four courses (twelve semester hours): REL 372, PHL 324, ENG 331, ENG 332, CMM 345, other approved substitutes.

**ASI 357. Vocation & the Arts. 3 Hours**

Interdisciplinary arts study course that explores the impact of an artist's sense of vocation on art; use of autobiography for self-knowledge. Open to Chaminade Scholars. Prerequisite(s): REL 356 or permission of department chairperson.

**ASI 358. Christianity, Citizenship & Society. 3 Hours**

Interdisciplinary social science course, capstone for Chaminade Scholars. Presentation of historical-theological context of the church and its impact on society. Designed to help students think through their place and role in the society in which they live, work, and worship. Prerequisite(s): (ASI 357; REL 356) or permission of department chairperson.

**ASI 358H. Christianity, Citizenship & Society. 3 Hours**

Interdisciplinary social science course, capstone for Chaminade Scholars. Presentation of historical-theological context of the church and its impact on society. Designed to help students think through their place and role in the society in which they live, work, and worship. Prerequisite(s): (ASI 357; REL 356) or permission of department chairperson.

**ASI 371. Professional Ethics in a Global Community - Business Administration. 3 Hours**

Virtues and responsibilities of professionals to self, clients, community, and world. Philosophical and religious approaches to ethical theory and decision-making. In-depth study of one of the following: business ethics (371), ethics and education (372), engineering ethics (373), philosophical (374) or religious (375) consideration of membership in a global community.

**ASI 372. Professional Ethics in a Global Community - Education. 3 Hours**

Virtues and responsibilities of professionals to self, clients, community, and world. Philosophical and religious approaches to ethical theory and decision-making. In-depth study of one of the following: business ethics (371), ethics and education (372), engineering ethics (373), philosophical (374) or religious (375) consideration of membership in a global community.

**ASI 373. Professional Ethics in a Global Community - Engineering. 3 Hours**

Virtues and responsibilities of professionals to self, clients, community, and world. Philosophical and religious approaches to ethical theory and decision-making. In-depth study of one of the following: business ethics (371), ethics and education (372), engineering ethics (373), philosophical (374) or religious (375) consideration of membership in a global community.

**ASI 374. Professional Ethics in a Global Community - Philosophical. 3 Hours**

Virtues and responsibilities of professionals to self, clients, community, and world. Philosophical and religious approaches to ethical theory and decision-making. In-depth study of one of the following: business ethics (371), ethics and education (372), engineering ethics (373), philosophical (374) or religious (375) consideration of membership in a global community.

**ASI 375. Professional Ethics in a Global Community - Religious. 3 Hours**

Virtues and responsibilities of professionals to self, clients, community, and world. Philosophical and religious approaches to ethical theory and decision-making. In-depth study of one of the following: business ethics (371), ethics and education (372), engineering ethics (373), philosophical (374) or religious (375) consideration of membership in a global community.

**ASI 390. Social Justice in Latin America. 3 Hours**

This course adopts an inter-disciplinary, highly experiential approach to the topic of social justice in Latin America by focusing on the social, theological, and ethical dimensions of justice. Taught on-site in Latin America. Prerequisite(s): SPN 201 or equivalent or permission of instructor.

**ASI 395. Integrative Capstone Project, India. 3 Hours**

Development and presentation of a major project which demonstrates integration of philosophical analysis and synthesis with at least two other disciplinary perspectives and which makes application of these disciplinary perspectives to an aspect of a life of ministry.

**ASI 397. Capstone Seminar on Human Rights Advocacy. 3 Hours**

This required capstone seminar enables seniors in the HRS program to (1) integrate their formal academic studies and internship or research experiences in light of the Marianist spirit of Christian Humanism that guides the University of Dayton, (2) discuss emerging human rights challenges that they are likely to confront as human rights professionals, and (3) consider possibilities for leadership and service in human rights or humanitarian assistance as a vocation. Seminar participants will read and discuss a set of readings concerning the moral foundations of the human rights idea, emerging human rights challenges, and new advocacy strategies. Students will write and present final papers in which they reflect on the study of human rights at the University of Dayton and their internship or research experiences, and consider the possibilities of pursuing human rights service as a vocation. Prerequisite(s): POL 333, POL 334 or permission of instructor.

**ASI 398. Special Topics in International Development. 3 Hours**

Study of political, philosophical, historical, and economic questions associated with developing countries. Topics determined by an interdisciplinary team.

**ASI 399. Interdisciplinary Topics. 3 Hours**

Study of special topics or themes of an interdisciplinary nature. Specific subtitles announced in composite. May be repeated as topics change.

**ASI 404. Applied Study in Community Issues. 3 Hours**

An advanced seminar that generates applied social science research related to contemporary social problems and public policy-making in the Dayton area. Students participate in research teams to assist government agencies in defining and analyzing critical social conditions (under supervision of faculty from various disciplines). Prerequisite(s): Permission of instructor.

**ASI 448. Seminar in Family Development. 1 Hour**

Interdisciplinary examination of issues relating to family relationships, changes in family life, and the social context of family life. Required of family development minors. Prerequisite(s): Twelve semester hours completed in the minor.

**ASI 495. Integrative Capstone Project, India Program. 3 Hours**

Development and presentation of a major project which demonstrates integration of philosophical analysis and synthesis with at least two other disciplinary perspectives and which makes application of these disciplinary perspectives to an aspect of a life of ministry.

**Mini Courses Courses****UDI 001. LeepFrog demo. 1 Hour**

This is a test. Pre-requisite: UDI 145.

**UDI 102. Plan for Financial Success. 1 Hour**

No description available.

**UDI 110. Maximizing Your International Experience - Explore. 1 Hour**

No description available.

**UDI 136. Does Anyone Date Anymore?. 1 Hour**

Target first year students with ethical and imaginative issues around student life so that this discussion continues throughout the next three years of their time on campus.

**UDI 139. Learning Rediscovered. 1 Hour**

Learning Rediscovered is a seven-week course which combines course work in learning with one-on-one academic coaching. The goal of this course is to provide you with a positive and supportive experience in which you can learn more about yourself as a learner and develop a series of strategies to enhance your academic success. Topics will include self-efficacy, motivation, Marianist community, responsibility, and a variety of learning and study skills.

**UDI 145. Life Skills for First-Year Student Athletes. 1 Hour**

This course focuses on the unique transitions student-athletes face upon entering college. Student-athletes will explore several aspects of college life such as time management, peer pressure, diversity and leadership. Enrollment is offered to first-year student-athletes only. Class limit: 20.

**UDI 146. Trans College Athlete Grad. 1 Hour**

No description available.

**UDI 149. Learning Connections. 2 Hours**

In this two-credit-hour course, we will explore the relationship between the research on learning, neuroscience, and your own experience of — and needs in — learning. The course will require you to make connections between the content of this course and your past and present learning experiences. The goal of the course is to further develop your approaches to studying and enhance your learning experiences in American college classes.

**UDI 152. Student Challenges. 0.5 Hours**

No description available.



**UDI 164. Faith, Vocation & Leadership. 1 Hour**

Students explore topics such as Christian identity, discipleship, and leadership (second semester: evangelization, service, and prayer) in an effort to understand Christian vocation and leadership.

**UDI 165. Chaminade Scholars. 0.5 Hours**

Students explore the topics of community, service and prayer in an effort to more fully understand Christian vocation.

**UDI 166. Choosing Your Career. 1 Hour**

This course is designed for first-year and sophomore students who have yet to decide on an academic major or career path. We will investigate personality type, interests, values and skills, and help students develop a more specific focus on their future career choices. Class limit: 24.

**UDI 169. Getting Down to "Business": Major and Career Exploration. 1 Hour**

This class assists students in examining the components of academic major and career choice. The focus is on career awareness, personal awareness and educational awareness as students relate to the process of selecting a business major and career. Planning skills and self-assessment instruments will help identify majors and tentative career options. Decision making strategies, resume writing, interviewing skills and job search techniques will be reviewed. Prerequisite(s): First-year student or sophomore; School of Business Administration major.

**UDI 172. Stargazing. 1 Hour**

Stargazing 101 is designed as an experiential and practical course to assist students in identifying stars, planets and constellations in the night sky. Students will also have the opportunity to use the research-grade telescope.

**UDI 175. The Art & Science of Learning. 2 Hours**

Students in this course will explore the intersection of research in neuroscience, psychology and educational psychology with their own experience of and needs in learning. The course will ask students to synthesize what they're learning about themselves. Topics will include self-efficacy, motivation, Marianist community, responsibility and a variety of learning and study skills. First-year students. Class limit: 15.

**UDI 176. Human Rights Week Committee. 1 Hour**

No description available.

**UDI 177. International Men's Basketball European Tour. 1 Hour**

No description available.

**UDI 182. Italy Tour Women's Basketball. 2 Hours**

With the goal of combining, enriching, and interweaving the women's basketball tour of Italy (August, 2013) and the educational and community building experience of being abroad, students will learn introductory as well as in-depth information and insights as they are guided in the process of thinking, reflecting, conversing, and writing about the history, society, culture, and art of Italy. (only to women basketball student athletes).

**UDI 185. Junior Achievement Economic Education Project. 1 Hour**

This minicourse provides a unique opportunity to undertake service learning in area elementary schools. UD students present six short modules covering basic economics topics using materials provided by the Junior Achievement organization (designed to complement the Ohio state curriculum requirements). UD students from any school or major are welcome. Participants, working in teams of three to four UD students, gain valuable experience in making presentations and, more importantly, the satisfaction of motivating young students to stay in school and envision a better future.

**UDI 188. Technology Certification. 1 Hour**

No description available.

**UDI 201. Catholic Spirituality and Prayer: It's All About Practice. 1 Hour**

What is prayer and how do I do it? Can prayers like the rosary really help me to grow spiritually? This course will explore different Catholic prayers by learning about a specific prayer style and practicing it as a class. Each session will be a formational, faith-sharing experience. Students will also have the opportunity to attend a half day retreat. This retreat is designed to help them to relax while taking intentional time to reflect upon and grow in their spiritually while exploring what it means to feel connected to the greater Catholic Church.

**UDI 202. Financial Strategies for the Real World. 1 Hour**

Credit cards, car loans, 401(k) plans, retirement benefits, mortgages: As students, you may have never had to deal with any of these financial services. However, as soon-to-be college graduates, they are all just around the corner. This course is designed to teach students how to take care of their own finances by giving answers to all their financial questions. We will spend a great deal of time talking about healthy vs. unhealthy financial decisions and the rewards and consequences that come from these decisions. Class limit: 25.

**UDI 205. Using Technology to Transform Learning. 1 Hour**

In this course, we will learn how to evaluate and use technologies for learning, with a special focus on mobile applications (e.g. Apps for iOS, Android, etc). This course includes class discussions and inquire-based activities and assignments to critically review various mobile applications for education and learning. Although not required, students are encouraged to provide their own mobile device.

**UDI 211. SAS Programming. 1 Hour**

The purpose of this course is to teach students SAS – a powerful software package used for data management, statistical analysis and optimization. Knowledge of this software is beneficial for students interested in either working in industry or continuing on to graduate school. Sophomore students will find this course useful. Class limit: 20.

**UDI 214. Peace Leadership. 1 Hour**

No description available.

**UDI 217. Writing in APA Style. 1 Hour**

In this course students will learn to write APA style research papers, including APA style citations and references. Assignments will include reading and writing research papers, critiquing the work of classmates, and revising their own work. Prerequisite(s): PSY217 or graduate student status.

**UDI 220. Maxie Prepare. 1 Hour**

No description available.

**UDI 223. Small Faith Community Leadership. 0.5 Hours**

This course provides spiritual and leadership development intended for the student leaders of small faith communities on campus, particularly those leading PORCH or Madeleine Groups through Campus Ministry. It will involve elements of prayer, reflection, and sharing on each leader's engagement in small faith communities. This course will engage Sophomores through Seniors, some of whom will repeat the course as they lead small faith communities for consecutive years.

**UDI 233. Sophomore Year Experience. 1 Hour**

No description available.

**UDI 238. Liturgical Music Practicum. 1 Hour**

No description available.

**UDI 239. Liturgical Music Practicum. 1 Hour**

Students will advance their studies of Catholic liturgical music through both classroom learning and practical experiences providing music in a mentored environment for a variety of campus liturgies.



**UDI 241. Literature Peace Prize. 1 Hour**

No description available.

**UDI 247. Introduction to Principles of Liturgy for Christian Musicians. 1 Hour**

This course provides liturgical background and knowledge for the new undergraduate music ministers who will be chosen by auditioning in spring 2015 and will be leading/ directing music at liturgies on campus. Enrollment is limited to those students who have completed the application process, auditioned and been accepted as undergraduate music ministers (called UGMMs for short). Selection will be in spring 2015.

**UDI 250. Exploring Everyday Technology. 1 Hour**

No description available.

**UDI 251. U LD-Pear Academic Leadership. 1 Hour**

No description available.

**UDI 262. Exploring Sustainability, Energy and Environment. 1 Hour**

This minicourse provides an exploration of sustainability, energy and environment (SEE) themes, people and organizations through a series of field trips. The course is designed for students in the SEE integrated learning-living community. It is also open to other students interested in SEE issues.

**UDI 265. Christian Leadership Development. 1 Hour**

This course will prepare the Callings student leaders to be effective leaders for incoming students by providing lessons on leadership skills such as leading peers in small group discussion, handling conflict and working in diverse communities of faith and ethnicity. Students will also learn best practices for developing prayer experiences and reflection. The course will utilize best practices from campus ministry, pastoral ministry, service learning and other disciplines. The methodology of the course will include a retreat experience, classroom presentations and discussions readings from best practices documents, and development and applied practice of skills.

**UDI 270. Premedical Community Health Experience. 1 Hour**

This one-credit pass/fail minicourse is intended to orient and train students to provide services as volunteers at Reach Out of Montgomery County. In addition to learning skills required to perform volunteer functions during the open clinic, students will learn about the complexities of providing health care to underserved populations and develop interpersonal skills to be empathic and informed advocates for patients. Class limit: 12.

**UDI 271. Vowed Women in Religion. 1 Hour**

This course will explore vowed religious life of women's communities in the Roman Catholic Church. It will include a brief historical overview and will then focus on the charisms of several women's religious communities today, paying particular attention to those that are active in the United States and especially on campus. The course will include a required live-in experience with a community of the student's choice.

**UDI 273. Introduction to Urban Poverty. 3 Hours**

No description available.

**UDI 278. Health Careers Seminar. 1 Hour**

This career planning course will explore a variety of health careers and help students gain insight into which careers are good fits based on self-assessment activities. The course will include clinical observation and opportunities for service-learning.

**UDI 281. Business Ethics Case Competition. 1 Hour**

By coaching a team to enter into a business ethics case competition, this course sharpens our student understanding of the principles of ethics and of the complexity of situations encountered regularly by executives and other professionals.

**UDI 283. MOS Certification - EXCEL. 1 Hour**

No description available.

**UDI 284. MOS Certification - WORD. 1 Hour**

No description available.

**UDI 303. GRE/GMAT Preparation. 1 Hour**

The purpose of this course is to prepare students for taking graduate entrance exams and to help improve their scores. The GMAT and GRE exams test a student's knowledge on multiple areas. The focus of the class will be on solving past exam questions.

**UDI 310. Maxie: On-Site. 0-1 Hours**

No description available.

**UDI 312. Meet Dayton. 1 Hour**

The Fitz Center tour bus will be the classroom. (capacity 24) Open to 10 international students undergraduate or graduate and 10 American students of the University Honors Program. A certificate of participation will be issued by the Fitz Center to all participants who meet attendance requirements. Participants will be a community of learners and hopefully new friends. Participants will improve their awareness of Dayton's history, people, institutions, neighborhoods, natural environment, and cultural assets. Participants will increase their exposure to students of other cultures, nationalities, languages and customs from their own. Participants will improve their abilities to communicate with other students who speak a first language different from their own. Participants will have a basic understanding of community building and practice the leadership skills of people who build and sustain communities. Participants will enjoy themselves as they experience summer in Dayton with one another. her.

**UDI 315. The River Steward Experience I. 1 Hour**

This course is for the River Stewards ONLY, the student group of the Rivers Institute at the University of Dayton. River Steward Experience Year I will highlight aspects of leadership development and civic engagement through education, experience and action in an interdisciplinary setting. Students will begin to lead discussions and interact with community partners. The Great Miami River will serve as the focus for community engagement and meaningful learning. Class limit: 20.

**UDI 317. Gvng Prf Prsntn-PSY. 1 Hour**

This class is about how to organize and present psychological research at professional conferences. Students taking this class should already possess the basic skills required to develop the research questions, design the studies, collect the data, conduct the statistical analyses and interpret the findings that would comprise the content for these presentations. these skills are taught in the 100 and 200 level classes listed as pre-requisites.

**UDI 324. Live Simply Sustainability. 1 Hour**

No description available.

**UDI 325. Women in Community: The Benedictine Experience. 2 Hours**

This course will prepare students for a week long monastic experience at a women's Benedictine Community in Erie, PA. At Mount Saint Benedict students will experience the monastic rhythm of prayer and work; encounter the inextricable link between faith and justice; and discover sacred beauty in the ordinary aspects of life made holy. There is a break-out fee of \$250.00 for the required May breakout to the monastery.

**UDI 335. Being Together: A Workshop in Sexual Ethics. 0.5 Hours**

In this course, you will reflect on your past and current experiences, including on this campus, using this reflection as a base for developing your own sense of what you value and hope for in your romantic and sexual relationships. At the end of the five sessions, you will have thought and written about many aspects of your relationship life, shared some of your thoughts with the group participants, and reflected further on your own. This is an ethics course-one that we hope will stay with you in a special way as you grow, and live, and love.

**UDI 339. Global Brigades: Preparing for Nicaragua. 1 Hour**

Roughly 50% of the Nicaragua population lives in poverty. Currently, more than 43% of the population lives in isolated, rural areas of the country. Of this population, 85% struggle to live on more than \$1 daily. Communities are limited in their access to basic health services because of poor road infrastructure, also making transportation and trade extremely difficult. Historically, each step forward that Nicaragua has taken in the realm of development has been counteracted with a step back in the form of a revolution, natural disasters, repealing of funding for governmental projects or foreign aid. Prerequisite(s): Acceptance to the Global Brigade service trip.

**UDI 341. Sexual Diversity. 1 Hour**

This course explores the lives and development of lesbian, gay, and bisexual people in contemporary American society with particular attention to individual, relationship, and community issues and their intersections. Students will be encouraged to examine their fears and prejudices as a way of discovering that sexual minority individuals are both unlike and just like everyone else. In this way all students- - straight or gay - can learn to be more sensitive to differences in sexuality that exist in the world around them.

**UDI 350. Wines of the World. 1 Hour**

This is a course for those who are convinced they will appreciate wines more if they learn more about wine and its history. This course will be a journey where we will share what we discover as we travel together over the wine roads of many nations. In addition to our reading and discussions we will share three experiences along the way. The first will be a component tasting where we will examine the individual tastes, aromas and sensations that come with both good and bad wines. Next we will have a formal wine tasting to explore the properties of red and white wines from several different countries. Finally we will share a dinner where the several courses have been matched to one or more wines.

**UDI 353. Project Letterpress. 0.5 Hours**

Students receive intensive instruction on setting letterpress type and work on the design, printing, and cuating of a large edition of letterpress prints. Prerequisite(s): VAF253.

**UDI 358. Christian Leadership. 1 Hour****UDI 359. Employment Readiness. 1 Hour**

Conducting your job search can be a daunting task, but breaking it down into manageable steps will help you be successful. You will acquire professionalism with ease and become more self assured in business interactions. You will also learn how to become a highly desirable employee by understanding career leadership skills most desired by employers, such as professionalism, problem solving, respecting workplace boundaries and diversity.

**UDI 361. Cross Cultural Immersion Preparation. 1 Hour**

The Cross-Cultural Immersion Preparation course offers students one credit hour as they prepare for their summer immersion through the Center for Social Concern. The course will introduce students to the intricacies of foreign travel and immersion and will discuss global issues. This is a requirement for all students participating in a summer immersion through the CSC and is only open to those students.

**UDI 363. ULEAD: Leadership Program Emerging Leaders. 2 Hours**

The UleaD course is carefully structured to explore concepts of leadership. Facilitated as an emerging leaders programs, UleaD focuses on providing opportunities for students to develop a better understanding of self and others, strengthen leadership skills, and network.

**UDI 364. Vocation & Leadership. 1.5 Hour**

Students explore topics such as community, prayer, and Christian servant-leadership in an effort to understand and engage in communal faith development and vocational discernment. The class is limited to juniors and seniors living in the Faith, Vocation and Leadership house.

**UDI 365. Faith, Vocation and Leadership. 1.5 Hour**

Students explore topics such as community, prayer and Christian servant-leadership in an effort to understand and engage in communal faith development and vocation discernment.

**UDI 366. Challenging Faith. 1 Hour**

This course explores ways of balancing social life and faith on UD's campus. Students will reflect on life experiences and discuss alcohol, sexuality, and over commitment as challenges to their faith journeys.

**UDI 368. Marianist Studies in Community. 1.5 Hour**

Living in intentional community will guide the students participating in the Marianist Student Community program. Student will engage in formation and dialogue concerning the Catholic and Marianist mission and identity of UD through formation in-service, prayer, and community building.

**UDI 371. Art Street Experience. 1 Hour**

ArtStreet residents will work collaboratively and independently to provide experience and reflect on multifaceted arts programming, enhancing their creativity, cultural literacy and awareness of diversity, community building skills and expressive abilities no matter what their major course of study is.

**UDI 379. Prep for Rare Book Exhibit. 1 Hour**

This mini-course will support the preparations for the Stuart Rose rare book exhibit at the University of Dayton in the fall of 2014. Students will engage the texts selected for the exhibit and aid in the development of materials for the promotion of the exhibit as well as the exhibit itself. Students will learn about the selection texts in terms of their content, histories and as particular artifacts representing different forms of written materials. This course will also potentially bridge into the support of development of digital media for use in educational apps and a website being developed for the exhibit.

**UDI 382. International Films. 1 Hour**

An advanced look at the multitude of significant films that are made around the world. Each film screened will be examined from historical, religious, philosophical, cultural, literary and artistic standpoints with the assistance of panel discussions led by faculty members from the Humanities.

**UDI 383. Servant Leadership: Hunger and Homelessness Awareness Week Leaders. 1 Hour**

This class is a great opportunity for students to educate our UD community and encourage us to take action on hunger and homelessness issues while helping to plan Hunger and this class will be leaders for Hunger and Homelessness Awareness Week. The students in this class will not only learn about the issues of hunger and homelessness, but will help plan and develop service projects, reflecting opportunities, advocacy events and will help with the fundraising and planning of the Thanksgiving Food Baskets.

**UDI 384. Social Justice Advocacy and Allies for Change. 1.5 Hour**

The Social Justice Advocates and Allies for Change course is a 1.5 credit course carefully structured to explore concepts of social justice, diversity, privilege and power. The course aims to help students develop the skills and knowledge needed to be an advocate and ally for social justice.

**UDI 385. Intergroup Dialogue: Religion. 1 Hour**

The Intergroup Dialogues course is carefully structured to explore social group identity, conflict, community and social justice. It involves an identity group defined by race and ethnicity. Each identity group is represented in the dialogue with two facilitators--one from each represented identity group--who encourage dialogue rather than debate. Facilitators and participants explore similarities and differences among and across groups and strive toward building a multicultural and democratic community.

**UDI 386. Inventing Identity. 1 Hour**

Making use of the 20th Annual Humanities Symposium, Inventing Identity, this interdisciplinary course addresses questions about women's identity formation in the midst of race, gender, abilities, class, and power differences.

**UDI 387. President's Diversity. 1 Hour**

No description available.

**UDI 389. Intergroup Dialogue: Ethnicity. 1.5 Hour**

The Intergroup Dialogues course is carefully structured to explore social group identity, conflict, community and social justice. It involves an identity group defined by race and ethnicity. Each identity group is represented in the dialogue with two facilitators - one from each represented identity group - who encourage dialogue rather than debate. Facilitators and participants explore similarities and difference among and across groups and strive toward building a multicultural and democratic community.

**UDI 390. Servant Leadership Seminar for REAL Dayton Leaders. 1 Hour**

In this minicourse for REAL Dayton leaders, students will explore the themes of servant leadership, community building, Catholic Social Teaching, the Marianist charism and mission, civic engagement and the assets and challenges of Dayton. REAL Dayton leaders will cultivate and apply servant leadership skills, working as a team to plan, implement and reflect on the 2014 REAL Dayton program.

**UDI 391. Civic Scholar Experience (Sophomores). 1 Hour**

This service learning minicourse fulfills the meeting requirements for the Dayton Civic Scholars program and combines classroom discussion, required reading and community speakers to help students integrate academic learning with service learning. Emphasis is on social justice and urban issues in the city of Dayton. Requirements include 60 hours of volunteer service and conference attendance OR an internship, a structured reflection journal, required readings, class participation and a senior capstone project.

**UDI 392. Dayton Civic Scholar (Juniors). 1 Hour**

This service learning minicourse fulfills the meeting requirements for the Dayton Civic Scholars program and combines classroom discussion, required reading and community speakers to help students integrate academic learning with service learning. Emphasis is on social justice and urban issues in the city of Dayton. Requirements include 60 hours of volunteer service and conference attendance OR an internship, a structured reflection journal, required readings, class participation and a senior capstone project.

**UDI 393. Community Service Internship. 3 Hours**

This service-learning mini course, which is only open to students in the Semester of Service program combines community service with reflection. Requirements include 450 hours of direct community service, an observation/reflection journal, required readings, a short story written from their community service experiences and class discussions on related issues. Only open to (5) students in the Semester of Service program.

**UDI 394. Civic Scholar Experience II. 1 Hour**

This mini-course will prepare students to get the greatest possible benefit from their participation in the study abroad offering, 'Investing a Great City: Integrated London ISSAP 2006'.

**UDI 395. Civic Scholar Experience IV. 1 Hour**

This service-learning minicourse fulfills the meeting requirements for the Dayton Civic Scholars program and combines classroom discussion, required reading and community speakers to help students integrate academic learning with service-learning. The emphasis is on social justice and urban issues in the city of Dayton. Requirements include 60 hours of volunteer service and conference attendance or an internship, structured reflection journal, required readings, class participation and a senior capstone project. Open only to Dayton Civic Scholars.

**UDI 396. Introduction to Medical Terminology. 1 Hour**

No description available.

**UDI 398. Civic Scholar Experience V. 1 Hour**

No description available.

**UDI 399. Civic Scholar Experience VI. 1 Hour**

This service-learning minicourse fulfills the meeting requirements for the Dayton Civic Scholars program and combines classroom discussion, required reading and community speakers to help students integrate academic learning with service-learning. The emphasis is on social justice and urban issues in the city of Dayton. Requirements include 60 hours of volunteer service and conference attendance or an internship, structured reflection journal, required readings, class participation and a senior capstone project. Open only to Dayton Civic Scholars.

**UDI 400. UD Interdisciplinary Experience II. 6 Hours**

No description available.

**UDI 410. Maxie: Integration. 1 Hour**

No description available.

**UDI 415. The River Steward Experience II. 1 Hour**

This course will be a seminar for the River Stewards, the student group of the Rivers Institute at the University of Dayton. The course will be available ONLY for River Stewards. Like the River Steward Experience Year I, this course will highlight aspects of leadership development and civic engagement through education, experience and action in an interdisciplinary setting. Furthermore, participants in the Year II minicourse will, under the supervision of the instructor, choose many of the topics and facilitate many of the discussions throughout the semester, as well as begin work on their senior service project. The Great Miami River Watershed will serve as the focus for community engagement and meaningful learning.

**UDI 419. Forum for-Young Catechetical Learners. 1 Hour**

This minicourse addresses the key themes of the National Directory for Catechesis regarding discipleship (Catholic moral life), Catholic social teachings and catechetical planning. Themes include: developing a pastoral catechetical plan; call and challenge of discipleship; Catholic social teachings; and communications technology and catechesis.

**UDI 421. UD Post-Undergraduate Mini Course. 1 Hour**

This mini-course is designed for graduating seniors who are considering participating in service after graduation. Students will explore opportunities to live out their vocation as well as come to a better understanding of spirituality, community living and discerning God's call.

**UDI 499. Continuing Education. 1 Hour**

No description available.

**Interdisciplinary-Bus Courses****BAI 103L. Business Computing Laboratory. 1 Hour**

Introduction to business software skills including spreadsheets, relational databases, and integration of computer applications. Overview of UD computer ethics policies.

**BAI 150. Business Educational Planning. 1 Hour**

Introduction to the School of Business Administration, the University, and educational planning.

**BAI 151. Business Integration Experience. 1 Hour**

Integrated introduction to major business processes and decision making.

**BAI 294. Special Topics in the School of Business Administration. 3 Hours**

Special Topics in the School of Business Administration.

**BAI 400. Dean's Leadership Laboratory. 0-3 Hours**

Leadership experience under the supervision of the Dean's office. Permission of Dean's office.

**BAI 497. Laboratory Work Experience. 1-6 Hours**

Under faculty sponsorship and in association with a participating industrial, commercial, educational, health-care, or governmental organization; practical experience in work associated with the student's major or minor concentration. (See internship coordinator for details.) Does not count toward major. Prerequisite(s): Permission of dean.

**Office of Educational Services**

The Office of Educational Services provides assistance to Catholic schools, public school districts and other educational providers to enable school personnel to reach policy decisions based on relevant knowledge and value commitments. "Relevant knowledge" includes financial studies, needs assessments, attitude surveys, enrollment projections and other information necessary for making intelligent decisions about specific policies. "Value commitments" include consideration of educational aims

and ethical questions inherent in policy decisions. One of the priorities of the office is service to Catholic schools. Another is its effort to act as a network to link those who share/value concerns as they relate to educational policy-making. The office is located in, draws support from, and uses the resources of the School of Education and Health Sciences. For more information contact the Associate Dean, School of Education and Health Sciences.

**Prelaw**

The Prelaw Program, designed to serve students from all areas of the University, provides undergraduates and alumni interested in law school with opportunities to acquire the knowledge and skills necessary for a successful legal career. While students interested in careers in law should choose their undergraduate majors to match their interests and abilities, they should also contact the Prelaw Program as early in their undergraduate careers as possible so they can receive effective prelaw advice.

Students can take advantage of one or both paths through the Prelaw Program. The interdisciplinary Prelaw Studies Minor enhances the preparation of students planning to seek admission to law school by promoting both the development of skills considered essential by both law schools and legal professionals -- critical reasoning, writing and analytical skills -- and professional skills. The Prelaw Program, i.e., the Director together with fifteen additional prelaw faculty advisors, provides students with curriculum guidance for developing the skills set needed for success in their future legal education and career, with law school admissions fairs, with aid in preparing for the Law School Admission Test (LSAT), including simulated tests and prep workshops, and with individual assistance in law school selection and law school applications. Moreover, the Program has a legal internship program and a Mock Trial team, both of which offer students valuable experiential learning, an undergraduate chapter of Phi Alpha Delta, a Prelaw Club and other opportunities for development based on the individual student's talents, interests and goals.

For further information concerning the Prelaw Program at the University of Dayton, students should contact the Prelaw Program in Alumni Hall, Room 117; phone (937) 229-4229.

**Reserve Officers Training Corps (ROTC)**

The Department of Military Science offers the Army ROTC training program on campus, leading to a commission as a second lieutenant in the U.S. Army at the time of graduation. For more information, visit the Department of Military Science.

In coordination with Wright State University, the Department of Aerospace Studies offers the Air Force ROTC training program on campus and at Wright State University. Successful completion of the program provides the opportunity to become a commissioned officer in the United States Air Force.

**University Honors Program**

The University Honors Program provides curricular offerings, programming and benefits to undergraduates who achieve and maintain superior academic records. Students earn the designation "University Honors student" in one of two ways. Entering first-year students with outstanding academic credentials are accepted into the Honors Program



upon admission to the University. Students may also enter the Honors Program after their first year with a minimum 3.5 grade-point average. All University Honors students are expected to maintain at least a 3.5 GPA.

Membership in the University Honors Program requires continued progress towards one of the Honors Program-designated diplomas. Honors students complete the requirements for an Honors diploma in one of two ways: by earning 15 Honors credits and completing a six-credit Honors thesis project or by earning 21 Honors credits without a thesis. To receive the Honors with Distinction diploma, Honors students earn 21 Honors credits and also complete the six-credit Honors thesis project for a total of 27 Honors credits. Complete details on maintaining membership and benefits are spelled out on the UHP website ([www.udayton.edu/honors](http://www.udayton.edu/honors)). Students who meet the University Honors Program graduation requirements will earn an Honors Program-designated diploma.

Students are offered a selection of Honors courses each term. In most instances, first-year University Honors students will enroll in either an exclusive first-year Honors seminar (ENG 200H) or first-year Core courses. Both of these options include designated honors housing. In line with the Common Academic Program (CAP), Honors students are encouraged to complete no more than 6 Honors credits in 100-level courses and 6 Honors credits in 200-level courses. A limited number of upper class Honors courses that complete either CAP or major course of study requirements are also available each semester. Students who have completed more than 75 hours may also earn Honors credits by arranging contract Honors courses with individual professors, provided that the contract is agreed upon and approved by the department Chair prior to the start of class. Complete directions are on the UHP website and students should initiate the process with the UHP. All honors courses will be designated as such on the student's academic transcript.

Student may also earn Honors credits through coursework associated with the Chaminade Scholars Program, Dayton Civic Scholars Program, River Stewards Program, Core Program, study abroad programs and by complete graduate level courses for undergraduate credit. The Honors credits earned are not necessarily one for one and these Honors credits do not appear on the student transcript. Honors students must earn a grade of B or better for any Honors courses or other Honors credit-eligible coursework to earn Honors credits towards the Honors diploma requirements.

Students may also earn Honors credits via approved non-academic credit experiences such as internships and co-ops, through successful completion of the Berry Summer Thesis Institute, the D.C. Flyers Program, and/or by completing the application process for a national fellowship through the Office of Fellowship Advising led by the UHP Associate Director. Specific ways of earning Honors credits can be found on the Honors Program website or at [www.udayton.edu/honors](http://www.udayton.edu/honors).

Numerous benefits are available to members of the University Honors Program. The University Honors Program sponsors speakers, cultural events, the Honors Art Exhibition and the Honors Students Symposium each year. First-year Honors students can participate in the Honors Student Welcome prior to the start of classes, and have the option of being housed with their first-year seminar or Core cohort. Upper class Honors students may request Honors housing through the Special Interest housing lottery. University Honors students benefit from early registration. They also receive graduate-level library benefits and enjoy the use of a special Honors study room in the library and access to the Honors Students Center in Alumni Hall. To receive benefits, students

must be UHP members in good standing; the GPA must be 3.5 or above and they may not be in violation of the University code of conduct.

University Honors students undertaking Honors thesis projects may apply for thesis grants; outstanding projects may be eligible for funding through the Palermo Honors Program Founders Fund. Grants may also be available for Honors students who present their academic research at professional conferences. University Honors students completing at least sixty semester credit hours are eligible to apply to the Cordell W. Hull International Fellows Fund for University Honors students. Established in 1997-98, this fund awards grants to support international learning, leadership, and service projects. Finally, a limited number of upper-class awards may be made to Honors students who demonstrate academic excellence and financial need. Upper class scholarships are also given to students who successfully complete the Berry Summer Thesis Institute and elect to complete an Honors thesis project.

## Directories

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- Faculty (p. 61)
- Governing and Advisory Boards (p. 83)
- Research Institute Staff (p. 83)

## Administrators

Title	Name
President	Daniel J. Curran, Ph.D.
Interim Provost	Paul H. Benson, Ph.D.
Interim Dean, College of Arts and Sciences	Jason L. Pierce, Ph.D.
Associate Provost for Academic Affairs and Learning Initiatives	Deborah J. Bickford, Ph.D.
Dean, School of Business Administration	Paul M. Bobrowski, Ph.D.
Government and Regional Relations Director	S. Ted Bucaro
Vice President for Finance and Administrative Services	Thomas E. Burkhardt
Vice President for Human Resources	Joyce M. Carter
Associate Provost for Faculty and Administrative Affairs	Patrick G. Donnelly, Ph.D.
Vice President for Student Development	William M. Fischer, J.D.
Vice President for Mission and Rector	Rev. James F. Fitz, S.M.
Vice President for University Advancement	David L. Harper
Dean, School of Education and Health Sciences	Kevin R. Kelly, Ph.D.
Vice President for Facilities Management	Beth H. Keyes
Vice President of Enrollment Management and Marketing	Sundar Kumarasamy



Vice President for Research and Executive Director of UDMI	Michael V. McCabe, Ph.D.
Dean, School of Law	Paul E. McGreal, J.D.
President, Academic Senate	Carolyn R. Phelps, Ph.D.
General Counsel	Mary Ann Poirier, J.D.
Dean, School of Engineering	Eddy M. Rojas, Ph.D.
Associate Provost and Chief Information Officer	Thomas D. Skill, Ph.D.
Director of Campus Ministry	Crystal C. Sullivan
Associate Provost for Graduate Academic Affairs	Paul M. Vanderburgh, Ph.D.
Vice President and Director of Athletics	Timothy J. Wabler
Dean, University Libraries	Kathleen M. Webb
Assistant Vice President for University Marketing and Strategies	Molly C. Wilson

## Faculty

### PAST PRESIDENT

Fitz, Raymond L., S.M. (1969), Engineering Management and Systems, Ferree Professor in Social Justice - B.E.E., University of Dayton, 1964; M.S., Polytechnic Institute of Brooklyn, 1967; Ph.D., 1970.

### DEANS EMERITI

Garten, Rev. Edward D. (1985), Library - B.S., Concord College, 1968; M.A., M.Div., in consortium, Pontifical College Josephinum, Ohio State University, and Methodist Theological School in Ohio, 1972; M.L.S., Kent State University, 1974; Ph.D., University of Toledo, 1977.

Gould, Sam (1985), Management and Marketing - B.S., Ohio State University, 1965; M.B.A., University of Colorado, 1970; Ph.D., Michigan State University, 1975.

Joseph, Ellis A. (1961), Education - A.B., University of Notre Dame, 1955; M.A., 1956; Ph.D., 1962; L.H.D. (Honorary), College of Mt. St. Joseph, 1989.

Morman, Paul J. (1990), History - B.A., University of Dayton, 1965; M.A., Bowling Green State University, 1966; Ph.D., Pennsylvania State University, 1973; M.S., State University of New York at Binghamton, 1984.

Sargent, Gordon A. (1985), Mechanical and Aerospace Engineering - B.S., Imperial College of Science and Technology, University of London, 1960; Ph.D., 1964.

### PROFESSORS EMERITI

Ahern, David W. (1977), Political Science - B.A., Southern Connecticut State College, 1970; M.A., University of Maryland, 1972; Ph.D., 1976.

Allik, Judith P. (1976), Psychology - B.A., Wellesley College, 1958; M.S., University of Pittsburgh, 1974; Ph.D., 1978.

Amsden, Robert T. (1978), Management Information Systems, Operations Management, and Decision Sciences - B.A., University of New Hampshire, 1960; M.S., Rutgers University, 1964; Ph.D., 1969.

Anderson, Gordon S. (1969), Teacher Education - B.A., Bethany College, 1953; M.S., State University of New York, 1959; Ed.D., Case Western Reserve University, 1969.

Anderson, Rev. William P. (1968), Religious Studies - A.B., Bloomfield College, 1961; B.D., Princeton Theological Seminary, 1964; Th.D., 1968.

Artz, Theodora S. (1974), Law Library - B.Ed., University of Toledo, 1962; M.A.L.S., 1974.

August, Eugene R. (1966), English - B.A., Rutgers University, 1958; M.A., University of Connecticut, 1960; Ph.D., University of Pittsburgh, 1965.

Back, Stanley J. (1959), Mathematics - B.S., University of Dayton, 1957; M.S., Purdue University, 1959.

Benedum, Richard P. (1973), Music - B.A., Concordia Teachers College, 1966; D.M.A., University of Oregon, 1972.

Berger, Robert N. (1964), Management and Marketing - B.S., University of Dayton, 1960; M.A., Ohio University, 1963; J.D., Chase School of Law, 1970.

Berney, Rex L. (1978), Physics - B.S., University of Missouri, 1971; M.S., 1973; Ph.D., 1978.

Biers, David W. (1976), Psychology - B.A., Lafayette College, 1966; M.S., Northwestern University, 1968; Ph.D., 1970.

Blatt, Stephen J. (1971), Communication - B.A., Morehead State University, 1964; M.A., Ohio University, 1967; Ph.D., 1969.

Bogner, Fred K. (1969), Civil and Environmental Engineering and Engineering Mechanics - B.S.C.E., Case Institute of Technology, 1961; M.S.E.M., 1964; Ph.D., 1967.

Bohlen, George A. (1980), Management Information Systems and Decision Sciences - B.S.M.E., Clemson University, 1958; M.S.I.E., Purdue University, 1963; M.S.B.A., George Washington University, 1968; Ph.D., Purdue University, 1973.

Buby, Rev. Bertrand A., S.M. (1967), Religious Studies - B.A., University of Dayton, 1955; S.T.L., Pontifical Biblicum Institute, 1964; S.S.L., University of Fribourg, 1966; S.T.D., Pontifical University of the Marianum, 1980.

Buckley, David M. (1968), Library - B.A., Miami University, 1966; M.A.L.S., Western Michigan University, 1968; M.A., University of Dayton, 1975.

Burns, Rev. Norbert C., S.M. (1959), Religious Studies - B.A., University of Dayton, 1945; S.T.L., University of Fribourg, 1954; S.T.D., The Angelicum, 1955.

Burrows, Ron J. (1981), Accounting - B.S., Northern Illinois University, 1965; M.S., 1968; Ph.D., Pennsylvania State University, 1980.

Butter, Eliot J. (1971), Psychology - B.A., Brooklyn College, 1965; M.A., 1969; Ph.D., University of Massachusetts, 1971.

Casey, Anthony L. (1969), Management Information Systems and Decision Sciences - M.Ed., Wright State University, 1973; M.S., University of Dayton, 1972.

Chiodo, Andria J. (1968), Global Languages and Cultures - B.A., University of Oregon, 1966; M.A., 1968.

Chuang, Henry N. (1965), Mechanical and Aerospace Engineering - B.S., National Taiwan University, 1958; M.S., University of Maryland, 1962; Ph.D., Carnegie Institute of Technology, 1966; Reg. Prof. Engr.

Clark, Willard C., Jr. (1963), Accounting - B.S., University of Dayton, 1959; M.B.A., Miami University, 1960; C.P.A., Ohio, 1962.

Cochran, Rebecca A. (1991), Law - B.A., Colorado College, 1974; M.A., Northwestern University, 1975; J.D., John Marshall Law School, 1984.

Conard, Robert C. (1967), Global Languages and Cultures - B.B.A., University of Cincinnati, 1956; M.A., 1962; Ph.D., 1969.

DaPolito, Frank J. (1970), Psychology - B.A., Bowling Green State University, 1959; Ph.D., Indiana University, 1966.

Deep, Ronald (1989), Engineering Management and Systems - B.S., U.S. Air Force Academy, 1960; M.S.E., Purdue University, 1970; Ph.D., Florida State University, 1976; Reg. Prof. Engr.

Dickinson, Kelvin H. (1979), Law - B.A., Western Michigan University, 1965; LL.B., Harvard University, 1968.

Doepker, Philip E. (1984), Mechanical and Aerospace Engineering - B.M.E., University of Dayton, 1967; M.S.M.E., Ohio State University, 1968; Reg. Prof. Engr.

Doyle, George R., Jr. (1982), Mechanical and Aerospace Engineering - B.S.A.E., Purdue University, 1965; M.S.A.E., 1967; Ph.D., University of Akron, 1973; Reg. Prof. Engr.

Drees, Doris A. (1956), Health and Sport Science - B.S., University of Dayton, 1956; M.A., Ohio State University, 1959; Ph.D., University of Iowa, 1968.

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Fost, Roberta S. (1969), History - B.A., University of California, 1964; M.A., University of Chicago, 1966; Ph.D., 1974.

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Geary, K. Michael (1976), Accounting - B.S., Indiana University, 1969; M.B.A., Miami University, 1974; Ph.D., University of Cincinnati, 1982; C.P.A., Illinois, 1975; Ohio, 1976.

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Geiger, John D. (1970), Teacher Education - B.A., Marquette University, 1966; Ph.D., 1972.

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- Hecht, Norman L. (1974), Materials Engineering - B.S., Alfred University, 1960; M.S., 1968; Ph.D., 1972.
- Henninger, Francis J. (1965), English - B.A., St. John's University, 1956; A.M., University of Notre Dame, 1958; M.A., University of Pennsylvania, 1962; Ph.D., 1965.
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- Inscho, Frederick R. (1976), Political Science - A.B., University of Detroit, 1968; M.A., State University of New York at Buffalo, 1972; Ph.D., 1976.
- Johnson, Patricia A. (1979), Philosophy - B.A., Eckerd College, 1967; M.A., Columbia University, 1969; M.A., University of Toronto, 1974; Ph.D., 1979.
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- Keil, R. Gerald, (1969), Chemistry - B.S., Villanova University, 1963; Ph.D., Temple University, 1967.
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- Kester, Jack E. (1966), Computer Science - B.S., University of Dayton, 1952; M.S., Ohio State University, 1958.
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- Tsui, Susan L., (1965), Library - B.A., National Taiwan University, 1961; M.S.L.S., University of Illinois, 1954.
- Turner, Dennis J. (1974), Law - B.A., Georgetown University, 1967; J.D., 1970.
- Ulrich, Lawrence P. (1964), Philosophy - B.A., Catholic University of America, 1961; M.A., 1962; M.Ed., Xavier University, 1964; Ph.D., University of Toronto, 1972; M.S., University of Dayton, 1985.
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- Vlahos, George E. (1978), Management Information Systems and Decision Sciences - B.S., University of Illinois, 1964; M.S., Southern Illinois University, 1967; Ph.D., University of Northern Colorado, 1974.
- Walker, Mary Ann (1970), Library - B.S.Ed., Kent State University, 1966; M.L.S., 1968; M.B.A., University of Dayton, 1981.
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- Whitney, James M. (1989), Civil and Environmental Engineering and Engineering Mechanics - B.A., Illinois College, 1959; B.S.T.E., Georgia Institute of Technology, 1959; M.S.T.E., 1961; M.S., Ohio State University, 1964; Ph.D., 1968.
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Amin, Julius A. (1989), History, Professor - B.A., University of Cameroon, 1979; M.A., West Texas State University, 1983; Ph.D., Texas Tech University, 1988.

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- Anderson, Maureen (2004), Law Library, Associate Professor - B.B.B., Marymount University, 1990; L.L.M., Pace University School of Law, 1995; J.D., Thomas M. Cooley Law School, 1994; M.L.S., Kent State University, 2001.
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- Baldwin, Joni (2005), Teacher Education, Associate Professor - B.A., University of Kentucky, 1978; M.A., St. Joseph College, 1986; Ed.D., University of South Dakota, 2004.
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- Collopy, Rachel (2005), Teacher Education, Associate Professor - B.A., Smith College, 1987; M.A., University of Michigan, 1993; Ph.D., 1999.
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- Fischer, Kathleen R. (2014), Physician Assistant Education, Clinical Faculty - B.S., East Stroudsburg University, 1983; M.S., Temple University, 1989; B.S., Midwestern University, 1997.
- Fischer, Marilyn R. (1992), Philosophy, Professor - B.A., Wheaton College, 1971; M.A., Boston University, 1975; Ph.D., 1978.
- Fitz, Raymond L., S.M. (1969), Engineering Management and Systems, Professor and Ferree Professor in Social Justice - B.E.E., University of Dayton, 1964; M.S., Polytechnic Institute of Brooklyn, 1967; Ph.D., 1970.
- Flach, Lawrence (1989), Chemical and Materials Engineering, Professor - B.Sc., University of Cape Town, 1980; M.Sc., 1982; Ph.D., University of Colorado, 1989.
- Flanagan, Melissa T. (1989), Student Activities, Administrative - B.S., Western Illinois University, 1986; M.A., Bowling Green State University, 1988.
- Fleischmann, Ellen L. (1998), History, Professor and Alumni Chair in the Humanities - B.A., Wesleyan University, 1977; Ph.D., Georgetown University, 1996.
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- Ghere, Richard K. (1984), Political Science, Associate Professor - B.A., Concordia College, 1968; M.A., University of Toledo, 1970; Ph.D., Wayne State University, 1975.
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- Griffin, Jeffrey L. (1990), Communication, Associate Professor - A.B., University of North Carolina, 1979; M.A., University of Texas, 1983; Ph.D., University of North Carolina, 1990.
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Kimbrough, R. Alan (1969), English, Professor - B.A., Carthage College, 1965; A.M., Brown University, 1966; Ph.D., 1974.

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- Kreutzer, Jacob (2013), Law, Visiting Professor - B.S., University of Washington, 2000; J.D., New York University, 2006.
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- Laubach, Lloyd L. (1980), Health and Sport Science, Associate Professor - B.S., Central State University, 1961; M.S., University of Oregon, 1962; Ph.D., Ohio State University, 1970.
- Laufer-Ukeles, Pamela (2006), Law, Professor - B.A., Columbia University, 1996; J.D., Harvard Law School, 2001.
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McCombe, John P. (2001), English, Professor - B.S., University of Pittsburgh, 1987; M.A., 1996; Ph.D., Ohio State University, 2000.

McCutcheon, James R., III (1997), Music, Artist-in-Residence - B.S., University of Dayton, 1973; B.M., Wright State University, 1978; M.M., 1991.

McEwan, Ryan (2008), Biology, Associate Professor - B.S., University of Kentucky, 1999; M.S., 2002; Ph.D., Ohio University, 2006.

McGreal, Paul E. (2011), Law, Professor - B.A., Williams College, 1989; J.D., Southern Methodist University, 1992; LL.M., Yale, 1994.

McGrew, Allen J. (1995), Geology, Associate Professor - B.A., Earlham College, 1983; M.S., Stanford University, 1987; Ph.D., University of Wyoming, 1992.

Meek, William (2009), Management and Marketing, Assistant Professor - B.S., Bradley University, 2003; M.B.A., 2004.

Merithew, Caroline A. (2002), History, Associate Professor - B.A., University of Missouri, 1990; M.A., University of Illinois at Urbana-Champaign, 1994; Ph.D., 2000.

Merriman, Harold L. (2006), Health and Sport Science, Associate Professor - B.A., Atlantic Union College, 1982; Ph.D., Loma Linda University, 1990; M.P.T., Andrews University, 1997.

Miller, Nancy A. (2002), Political Science, Associate Professor - B.A., Clemson University, 1995; M.A., Rice University, 2000; Ph.D., 2002.

Miller, Sheila (2004), Law, Professor of Lawyering Skills - B.A., Miami University, 1983; J.D., University of Cincinnati, 1987.

Miller, Tracy K. (2002), Management and Marketing, Lecturer - B.S.B.A., Ohio State University, 1985; M.L.H.R., 1986.

Miller, Vincent (2009), Religious Studies, Professor and Gudorf Chair in Catholic Theology - M.A., University of Notre Dame, 1990; Ph.D., 1997.

Mohan, Nancy (1987), Economics and Finance, Associate Professor - B.S., Indiana University, 1975; M.B.A., Wright State University, 1977; Ph.D., University of Cincinnati, 1986.

Monk, Debra P. (1999), Residential Programs, Administrative - B.A., University of North Carolina at Charlotte, 1993; M.A., University of Dayton, 1995.

Montoya, R. Matthew (2008), Psychology, Associate Professor - B.A., University of California, Berkeley, 1996; M.A., University of Massachusetts Dartmouth, 1998; Ph.D., University of North Carolina at Chapel Hill, 2004.

Moon, Donald L. (1974), Electrical and Computer Engineering and Electro-Optics, Professor - B.S.E.E., West Virginia Institute of Technology, 1963; M.S.E.E., University of Toledo, 1966; Ph.D., Ohio State University, 1974.

Moore, Cecilia A. (1996), Religious Studies, Associate Professor - A.B., Sweet Briar College, 1988; M.A., University of Virginia, 1991; Ph.D., 1996.

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- Morris III, Willie L. (1993), Music, Associate Professor - B.M.E., East Carolina University, 1982; M.A., Stephen F. Austin State University, 1984; D.M.A., University of Missouri at Kansas City Conservatory of Music, 1996.
- Mosser, Kurt (1992), Philosophy, Associate Professor - B.A., Southern Methodist University, 1979; M.A., University of Chicago, 1982; Ph.D., 1990.
- Mueller, Steven D. (1976), Counseling Center, Administrative - B.A., University of Dayton, 1974; M.A., 1976; Ed.D., University of Cincinnati, 1987.
- Mueller-Hansen, Karolyn (2009), Biology, Assistant Professor - B.S., Pennsylvania State University, 1980; M.S., Drexel University, 1984; Ph.D., University of Delaware, 1990.
- Mundew, Leslie M. (2002), Economics and Finance, Lecturer - B.S., Ohio State University, 1979; M.B.A., Harvard University, 1984.
- Murray, Andrew P. (1996), Mechanical and Aerospace Engineering, Professor - B.S., Rose-Hulman Institute of Technology, 1989; M.S., University of California, Irvine, 1993; Ph.D., 1996.
- Mykytka, Edward F. (1998), Engineering Management and Systems, Professor - B.S., University of Dayton, 1976; M.S., University of Iowa, 1978; Ph.D., University of Arizona, 1983.
- Myszka, David H. (1989), Mechanical and Aerospace Engineering, Associate Professor - B.S.M.E., State University of New York at Buffalo, 1985; M.S.M.E., 1989; M.B.A., University of Dayton, 1996; Ph.D., 2009; Reg. Prof. Engr.
- Naruse, Cheryl N. (2014), English, Assistant Professor - B.A., University of Washington, 2005; M.A., University of Hawaii, 2008; Ph.D., Anticipated 2014.
- Neeley, Grant (2005), Political Science, Associate Professor - B.A., Texas A&M University, 1989; M.P.A., 1991; Ph.D., University of Tennessee, 1996.
- Neiheisel, Steven R. (2013), Political Science, Lecturer - B.A., Xavier University, 1981; M.B.A., 1982; Ph.D., Washington University, 1990.
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- Nielsen, Mark G. (2001), Biology, Associate Professor - B.A., Oberlin College, 1988; Ph.D., Stanford University, 1994.
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- Oldenski, Thomas, S.M. (1994), Educational Leadership, Associate Professor - B.A., University of Dayton, 1972; M.Ed., Boston College, 1975; M.A., Western Michigan University, 1978; Ed.S., University of Dayton, 1984; Ph.D., Miami University, 1994.
- O'Mara, Erin M. (2011), Psychology, Assistant Professor - B.A., Quinnipac University, 2003; M.A., Northern Arizona University, 2005; Ph.D., University of Tennessee, 2011.
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- Pair, Donald L. (1991), Geology, Professor - B.S., St. Lawrence University, 1983; M.Sc., University of Waterloo, 1986; Ph.D., Syracuse University, 1991.
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- Penno, Robert P. (1987), Electrical and Computer Engineering, Associate Professor - B.S.M.E., Rose-Hulman Institute of Technology, 1971; M.S.E.E., 1984; Ph.D., University of Dayton, 1987.
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- Perna, Richard P. (1982), Law, Professor - B.A., Villanova University, 1971; J.D., 1975.
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Reilly, Tracy L. (2006), Law, Professor - B.A., Northern Illinois University, 1990; J.D., Valparaiso University School of Law, 1995.

Ren, Dan (2013), Mathematics, Assistant Professor - B.S., Beijing Normal University, 2004; M.A., 2006; M.S., New Mexico State University, 2008; Ph.D., Boston University, 2013.

Reynolds, Patrick A. (1996), Music, Associate Professor - B.M., University of Michigan, 1981; M.M., 1983; D.M.A., University of Cincinnati, 1997.

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Richards, Stephen B. (2000), Teacher Education, Associate Professor - B.A., University of North Carolina at Chapel Hill, 1976; M.A., East Carolina University, 1979; Ed.D., Florida Atlantic University, 1999.

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- Ruggiero, John G. (1995), Economics and Finance, Professor and Edmund B. O'Leary Chair in Economics - B.A., State University of New York at Cortland, 1988; M.A., Syracuse University, 1992; Ph.D., 1995.
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- Russo, Charles J. (1996), Educational Leadership, Professor and Joseph Panzer Professor of Education - B.A., St. John's University, 1972; M.Div., Seminary of the Immaculate Conception, 1978; J.D., St. John's University School of Law, 1983; Ed.D., St. John's University Graduate School of Education and Human Services, 1989.
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- Salih, Jusuf (2012), Religious Studies, Assistant Professor - B.A., Marmara University, 1994; M.A., 1997; M.A., University of Virginia, 2006; Ph.D., 2011.
- Salisbury, William D. (2002), Management Information Systems, Operations Management and Decision Sciences, Assistant Professor - B.B.A., Ohio University, 1986; M.B.A., Miami University, 1988; Ph.D., University of Calgary, 1996.
- Sandhu, Sarwan S. (1980), Chemical and Materials Engineering, Professor - B.Sc., Panjab University, 1961; B.S.Ch.E., 1966; M.S.E., University of New Brunswick, 1970; D.I.C., Imperial College, University of London, 1973; Ph.D., University of London, 1973.
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- Sarangan, Andrew M. (2000), Electro-Optics, Professor - B.A.Sc., University of Waterloo, 1991; M.A.Sc., 1993; Ph.D., 1996.
- Scantlin, Ronda M. (2002), Communication, Associate Professor - B.A., Bethany College, 1992; M.A., University of Kansas, 1995; Ph.D., University of Texas-Austin, 1999.
- Schaller, Molly A. (1989), Counselor Education and Human Services, Associate Professor - B.A., Ohio State University, 1987; M.S., Miami University, 1989; Ph.D., Ohio University, 2000.
- Schellhammer, Ulrike B. (2001), Global Languages and Cultures, Lecturer - M.A., Rice University, 1989; Ph.D., 1993.
- Scheuermann, George (2007), Teacher Education, Clinical Faculty - B.A., Case Western Reserve University, 1974; M.A., Miami University, 1976.
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- Schutte, Maria G. (2013), Economics and Finance, Assistant Professor - B.S., Pontifical Catholic University of Ecuador, 1993; M.B.A., University of Notre Dame, 1995; Ph.D., University of Missouri, 2007.
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- Sexto, Laura Elizabeth (2012), History, Lecturer - B.A., University of California Santa Cruz, 1997; M.A., New York University, 2002; Ph.D., University of California, Irvine, 2012.
- Sexton, Maureen (2005), English, Lecturer - B.A., University of Dayton, 1995; M.A., 2002.
- Shaw, Lori E. (1988), Law, Professor of Lawyering Skills - B.S., University of Dayton, 1983; J.D., 1987.
- Sheidler, Jeb O. (2013), Physician Assistant Education, Clinical Faculty - B.A., Miami University, 1987; A.A., Kettering College of Medical Arts, 1991; M.P.A.S., University of Nebraska, 2004.
- Shen, Ju (2014), Computer Science, Assistant Professor - M.S., University of Birmingham, United Kingdom, 2006; Ph.D., University of Kentucky, 2014.
- Sievers, David A. (2009), Music, Artist-in-Residence - B.M.A., Washington State University, 1994; M.M.A., Boise State University, 1996; D.M., Indiana University, 2009.
- Simon, Julie (2010), Mathematics, Lecturer - B.A., Wellesley College, 1983; Ph.D., University of Illinois, 1989.
- Singh, Amit (2007), Biology, Associate Professor - B.S., H.P. University, 1988; M.S., Devi Ahilya University, 1990; Ph.D., 1995.
- Skill, Thomas D. (1984), Communication, Professor - B.A., State University of New York at Buffalo, 1978; M.A., 1980; Ph.D., 1984.

Slade, R. Andrew (2003), English, Associate Professor - B.A., Seattle University, 1995; B.A., Katholieke Universiteit Leuven, 1996; Ph.D., State University of New York at Stony Brook, 2004.

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Smith, Anthony B. (1999), Religious Studies, Associate Professor - B.A., Boston College, 1985; M.A., University of Minnesota, 1989; Ph.D., 1995.

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- Li, Lingchuan (2004), Research Engineer - B.S., University of Science and Technology Beijing, 1987; M.S., 1989; Ph.D., 1994.
- Little, Brian K. (2012), Research Chemist - B.S., Valdosta State University, 2000; M.B.A., Georgia Southern University, 2004; Ph.D., Auburn University, 2011.
- Makote, Rajendra D. (2001), Research Scientist - M.S., Shivaji University, 1989; Ph.D., Indian Institute of Technology, 1996.
- Marcucci, Nicholas J. (2010), Team Leader-Software Engineer - B.S., University of Dayton, 2010.
- Marks, Christopher R. (2010), Research Engineer - B.S., Michigan State University, 2001; M.S., Wright State University, 2006.
- Marrara, Thaddeus A. (2007), Image Processing Engineer - B.S., West Virginia University, 1998; B.S., 1998.
- Martin, Gary E. (2007), Senior Research Engineer - B.S., Ohio University, 1971; M.S., University of Dayton, 1979.
- Martin, Richard W. (1976), Research Engineer - B.S., Ohio University, 1970; B.B.A., 1972.
- Martinez, Liliana A. (2009), Biofuel Lab Manager/Engineer - B.S., Pontificia Universidad Javeriana, 2001; M.S., University of Puerto Rico, 2008.
- McCabe, Michael V. (1993), Vice President for Research and Executive Director, Research Institute - B.S., Capital University, 1971; M.S., University of Cincinnati, 1973; Ph.D., 1976; M.B.A., 1980.
- McCray, Daniel B. (1977), Senior Research Materials Engineer - B.S., Wright State University, 1995; M.S., University of Dayton, 1997.
- McGuinness, Christopher D. (2009), Associate Image Processing Engineer - B.S., University of Dayton, 2009.
- McInturff, Angela M. (2012), Associate Research IT Professional - B.S., University of Dayton, 2000.
- McNichols, John M. (2012), Associate Digital Systems Engineer - B.S., University of Dayton, 2010; M.S., 2012.
- Meckstroth, Christopher M. (2010), Senior Research Engineer - B.S., University of Cincinnati, 2007; M.S., 2010.
- Miller, Barbara A. (2006), Research Scientist - B.S., Wright State University, 2001; M.S., Clemson University, 2006.
- Mooney, Thomas J. (2008), Research Engineer - B.S., State University of New York at Buffalo, 1986.
- Morgan, Alexander B. (2005), Group Leader-Distinguished Research Scientist - B.S., Virginia Military Institute, 1994; Ph.D., University of South Carolina, 1998.
- Morton, Scott A. (2009), Senior Research Engineer - B.S., Parks College of St. Louis University, 1985; M.S., Air Force Institute of Technology, 1989; Ph.D., 1996.
- Mueller, Susan S. (2006), Research Biologist - B.S., Wright State University, 1987.
- Murray, Paul T. (1982), Senior Research Chemist - B.S., University of Cincinnati, 1974; Ph.D., University of North Carolina, 1979.

- Nguyen, Hung M. (2000), Associate Research Information Technology Professional - B.S., Michigan State University, 1996.
- Nguyen, Monica A. (2012), Cognitive Research Coordinator - B.S., Arizona State University, 2010.
- Northern, Christopher B. (2013), Research Engineer - B.S., Mercer University, 2006; M.S., 2012.
- O'Connor, Michael P. (2008), Group Leader-Senior Image Processing Engineer - B.S., University of Dayton, 1993.
- Olding, Robert B. (2001), Senior Research Systems Engineer - B.E.E., University of Dayton, 1977; M.C.S., 1985.
- Olson, Steven E. (1992), Senior Research Engineer - B.S., University of Dayton, 1991; M.S., 1993; Ph.D., 2001.
- Patton, Steven T. (1999), Acting Group Leader-Senior Research Scientist - B.A., Wittenberg University, 1988; M.S., Ohio State University, 1994; Ph.D., 1998.
- Pfeiffer, Phillip E. (2010), Software Engineer - B.S., University of Dayton, 2006; M.S., 2011.
- Phelps, Andrew W. (1990), Senior Research Scientist - B.S., Pennsylvania State University, 1983; M.S., 1987; Ph.D., 1990.
- Phillips, Peter L. (2008), Research Engineer - B.S., University of Dayton, 2008.
- Pierce, Jennifer L. (1998), Senior Research Materials Engineer - B.S., Wright State University, 1995; M.S., 1998.
- Pike, Megan N. (2011), Associate Research Engineer - B.S., University of Dayton, 2009.
- Pinnell, William B. (1988), Acting Group Leader-Senior Failure Analysis Engineer - B.S., University of Dayton, 1988.
- Poormon, Kevin L. (1987), Group Leader-Senior Research Engineer - B.S., University of Dayton, 1987; M.S., 1988.
- Porter, William J., III (1990), Senior Research Engineer - B.A., Miami University, 1988; M.S., University of Dayton, 1990.
- Powar, Nilesh U. (2003), Research Software Engineer - B.S., Bombay University, 1999; M.S., Wright State University, 2002.
- Rafferty, Daniel P. (2008), Sensor Researcher - B.S., Pennsylvania State University, 2000.
- Ratermann, Philip A. (2012), Distinguished Business Developer - B.S., University of Dayton, 1983.
- Reinert, James D. (2011), Associate Research Engineer - B.S., University of Dayton, 2010.
- Rice, Brian Patrick (1986), Division Head-Multiscale Composites and Polymers - B.S., Ohio State University, 1986; M.S., University of Dayton, 1990.
- Riggin, Kelly R. (2012), Software Team Leader - B.S., Purdue University, 1985.
- Roach, Kevin P. (1993), Senior Research Engineer - B.S., University of Maryland, 1988.
- Ruschau, John J. (1974), Division Head-Structural Integrity - B.S., University of Dayton, 1973; M.S., 1979.
- Safriet, Sirina (2005), Research Scientist - B.S., King Mongkut's Institute of Technology, 1991; M.S., University of Akron, 1995; Ph.D., 1999.
- Saliba, Susan S. (1986), Division Head-Nonstructural Materials - B.S., Auburn University, 1984; M.S., University of Dayton, 1986.
- Samios, John E. (2012), Systems/Security/Network Engineer - B.S., University of Pittsburgh, 1985; M.S., University of Dayton, 1990.
- Sathish, Shamachary (1996), Group Leader-Distinguished Research Engineer - B.S., Yuvaraja College, 1974; M.S., University of Mysore, 1976; Ph.D., 1984.
- Schehl, Norman D. (1993), Research Engineer - B.S., University of Dayton, 1991; M.S., 1993.
- Schindelholz, Joseph F. (2007), Senior Program Manager - B.S., University of Wisconsin, 1969; M.S., Webster University, 1987.
- Schultek, Brian R. (2011), Associate Computer Engineer - B.S., University of Dayton, 2007.
- Scott, Ollie L. (1986), Research Engineer - B.S., Wilberforce University, 1982; M.S., University of Dayton, 1997.
- Scudder, Richard P. (2009), Director, Center for UAS Exploitation - B.S., University of Bridgeport, 1981; M.S. Naval War College, 2002.
- Sebastian, James R. (1995), Research Engineer - B.M.E., B.E.E., University of Dayton, 1995; M.S., 1998.
- Shafer, Linda M. (2002), Senior Research Chemist - B.S., University of Akron, 1986.
- Shaffer, Daniel A. (2012), Associate Image Processing Engineer - B.S., Cedarville University, 2011.
- Shen, Yuhui (2009), Senior Research Scientist - B.S., Dalian University of Technology, 1985; M.S., 1988.
- Shin, Eunsung (2004), Research Engineer - B.S., Hallym University, 1990; M.S., 1997; Ph.D., University of Dayton, 2004.
- Sidhu, Sukhjinder S. (1992), Division Head-Energy Technologies and Materials - B.S., Osmania University, 1987; M.S., University of Illinois, 1991; Ph.D., 1992.
- Sihn, Sangwook (1999), Senior Research Engineer - B.A., Seoul National University, 1990; M.S., Stanford University, 1992; Ph.D., 1997.
- Simone, Kenneth C. (2008), Digital Systems Engineer - B.S., Southern Illinois University, 1982.
- Smith, Francis R. (2005), Senior Research Engineer - B.S., Syracuse University, 1982; M.S., Air Force Institute of Technology, 1988.
- Smith, Howard E. (2002), Senior Research Scientist - B.S., DePauw University, 1980; M.S., Cornell University, 1982; Ph.D., 1986.
- Stacy, Bradley M. (2012), Associate Composite Research Engineer - B.S., University of Dayton, 2011; M.S., 2012.
- Stipp, Ryan A. (2008), Associate Image Processing Engineer - B.S., Ohio State University, 2008.

- Stonecash, T. Jared (2005), Acting Group Leader-Composites Research Engineer - B.S., University of Dayton, 2003; M.S., 2005.
- Stouffer, Scott D. (1996), Senior Research Engineer - B.S., Virginia Polytechnic Institute and State University, 1985; M.S., 1989; Ph.D., 1995.
- Striebich, Richard C. (1986), Senior Research Engineer - B.S., University of Notre Dame, 1982; M.S., University of Dayton, 1993.
- Strunks, Gregory A. (2007), Senior Research Engineer - B.S., University of Dayton, 1988; M.S., 1990; M.S., State University of New York at Albany, 2002.
- Sundlie, Paul O. (2012), Associate Image Processing Engineer - B.S., University of Dayton, 2010.
- Szumlowicz, Frank (1978), Group Leader-Distinguished Research Physicist - B.S., Case Western Reserve University, 1971; M.S., 1973; Ph.D., 1976.
- Tandon, Gyaneswar P. (1999), Group Leader-Distinguished Research Scientist - B.T., Indian Institute of Technology, 1981; M.S., Rutgers University, 1984; M.Phil., 1985; Ph.D., 1986.
- Taylor, Kerry D. (2010), Aerospace Hub Development Director - B.S., University of Kentucky, 1980; B.S., University of South Florida, 1984; M.A., Central Michigan University, 1987; M.S., 1999.
- Taylor, Philip H. (1985), Group Leader-Distinguished Research Scientist - B.S., Oneonta State College, 1980; Ph.D., Pennsylvania State University, 1984.
- Thomas, David K. (2009), Research Engineer - B.S., University of Dayton, 1976; M.S., Marshall University, 1988.
- Thomas, Evan L. (2009), Materials Scientist - B.S., Southern University & A&M College, 2002; Ph.D., Louisiana State University, 2006.
- Thomas, Ronald L. (1999), Internet/Programmer Analyst.
- Tienda, Kevin A. (2011), Associate Research Engineer - B.S., Wright State University, 2010.
- Toth, Douglas K. (1990), Research Lubricants Engineer - B.S., Southern Methodist University, 1987; M.S., Case Western Reserve University, 1989.
- Tsao, Bang-Hung (1999), Group Leader-Distinguished Materials Research Scientist - B.S., National Cheng Kung University, 1980; M.S., Arizona State University, 1986; Ph.D., 1989.
- Tsao, Victor (2009), Associate Research Software Engineer - B.S., University of Dayton, 2008.
- Turri, William F. (2007), Group Leader-Image Processing Engineer - B.S., University of Dayton, 2000; M.S., 2002.
- Vangsness, Marlin D. (1985), Senior Research Physicist - B.S., North Dakota State University, 1985.
- Vehorn, Keith A. (2011), Associate Structural Analyst - B.S., Wright State University, 2011.
- Velker, Michael R. (2012), Associate Software Engineer - B.S., University of Dayton, 2012.
- Vicen, Nicholas P. (2007), Associate Image/Signal Processing Engineer - B.S., University of Dayton, 2005; M.S., 2007.
- Voevodin, Natalia N. (1999), Senior Research Scientist - B.S., Tula Polytechnical Institute, 1985; M.S., 1986; Ph.D., University of Dayton, 2002.
- Vukelich, Sharon I. (2003), Group Leader-Distinguished Research Engineer - B.S., Michigan State University, 1974; M.S., University of Cincinnati, 1980.
- Walker, David M. (2009), Digital Systems Engineer - B.S., Wright State University, 2002; M.S., 2004.
- Walters, Larrell B. (2003), Division Head-Sensor Systems - B.S., Bowling Green State University, 1978; M.S., Kent State University, 1985.
- Walters, Molly R. (2011), Research Engineer - B.S., University of Dayton, 2003.
- Warm, Joel S. (2013), Distinguished Research Cognitive Psychologist - B.S., City College of the City University of New York, 1956; M.S., 1958; Ph.D., University of Alabama, 1966.
- Webber, Frederick C. (2011), Associate Programming Engineer - B.S., Rose-Hulman Institute of Technology, 2007; M.S., Air Force Institute of Technology, 2009.
- West, Zachary J. (2004), Research Engineer - B.S., Tri-State University, 2001; M.S., University of Dayton, 2004.
- Whiting, Christofer E. (2011), Research Scientist - B.S., University of Minnesota, 1999; Ph.D., 2007.
- Wicks, Michael C. (2011), Distinguished Researcher-RF Technology - B.S.E.E., Rensselaer Polytechnic Institute, 1981; M.S.E.E., Syracuse University, 1985; Ph.D., 1995; M.A., 2000.
- Williams, Theodore F. (1990), Group Leader-Senior Research Engineer - B.S., University of Dayton, 1982.
- Wolf, James D. (1979), Group Leader-Senior Research Materials Scientist - B.S., University of Dayton, 1979; M.S., 1982.
- Workman, John M. (2010), Senior Research Materials Scientist - B.S., Miami University, 1971; M.S., University of Cincinnati, 1985; Ph.D., 1987; M.A., Wright State University, 1995.
- Yamada, Takahiro (1999), Senior Research Chemist - B.S., University of Osaka, 1985; M.S., 1987; M.S., University of New Haven, 1994; Ph.D., New Jersey Institute of Technology, 1999.
- Yoon, Yuhchae (2006), Research Scientist - B.S., Yonsei University, 1996; M.S., 1998; M.S., Ohio State University, 2002; Ph.D., 2004.
- Zabarnick, Steven S. (1988), Group Leader-Distinguished Research Chemist - B.S., State University of New York at Binghamton, 1980; Ph.D., Pennsylvania State University, 1984.
- Zhang, Qihong (2011), Materials Scientist - B.S., Hebei Institute of Technology, 1983; M.S., 1991; Ph.D., University of Dayton, 2010.
- Zhou, Eric Guangming (2005), Research Engineer - B.S., China Textile University, 1986; M.S., Kansas State University, 1999.

# Common Academic Program

The Common Academic Program (CAP) is the portion of the curriculum shared by all undergraduate students, starting with the entering class in 2013. It embodies seven UD learning goals: scholarship, faith traditions, diversity, community, practical wisdom, critical evaluation of our times and vocation. The courses challenge students and faculty to link aspects of their own lives, majors and careers to a broader world. Students' unique learning experiences promote knowledge, skills and dispositions through engaging, developmental and integrated courses and experiences that are necessary for 21st Century graduates.

## Learning Outcomes

- Scholarship:** All undergraduates will develop and demonstrate advanced habits of academic inquiry and creativity through the production of a body of artistic, scholarly or community based work intended for public presentation and defense.
- Faith traditions:** All undergraduates will develop and demonstrate ability to engage in intellectually informed, appreciative, and critical inquiry regarding major faith traditions. Students will be familiar with the basic theological understandings and central texts that shape Catholic beliefs and teachings, practices, and spiritualities. Students' abilities should be developed sufficiently to allow them to examine deeply their own faith commitments and also to participate intelligently and respectfully in dialogue with other traditions.
- Diversity:** All undergraduates will develop and demonstrate intellectually informed, appreciative, and critical understanding of the cultures, histories, times, and places of multiple others, as marked by class, race, gender, ethnicity, religion, nationality, sexual orientation, and other manifestations of difference. Students' understanding will reflect scholarly inquiry, experiential immersion, and disciplined reflection.
- Community:** All undergraduates will develop and demonstrate understanding of and practice in the values and skills necessary for learning, living, and working in communities of support and challenge. These values and skills include accepting difference, resolving conflicts peacefully, and promoting reconciliation; they encompass productive, discerning, creative, and respectful collaboration with persons from diverse backgrounds and perspectives for the common purpose of learning, service, and leadership that aim at just social transformation. Students will demonstrate these values and skills on campus and in the Dayton region as part of their preparation for global citizenship.
- Practical wisdom:** All undergraduates will develop and demonstrate practical wisdom in addressing real human problems and deep human needs, drawing upon advanced knowledge, values, and skills in their chosen profession or major course of study. Starting with a conception of human flourishing, students will be able to define and diagnose symptoms, relationships, and problems clearly and intelligently, construct and evaluate possible solutions, thoughtfully select and implement solutions, and critically reflect on the process in light of actual consequences.
- Critical evaluation of our times:** Through multidisciplinary study, all undergraduates will develop and demonstrate habits of inquiry and reflection, informed by familiarity with Catholic Social Teaching, that equip

them to evaluate critically and imaginatively the ethical, historical, social, political, technological, economic, and ecological challenges of their times in light of the past.

**7. Vocation:** Using appropriate scholarly and communal resources, all undergraduates will develop and demonstrate ability to articulate reflectively the purposes of their life and proposed work through the language of vocation. In collaboration with the university community, students' developing vocational plans will exhibit appreciation of the fullness of human life, including its intellectual, ethical, spiritual, aesthetic, social, emotional, and bodily dimensions, and will examine both the interdependence of self and community and the responsibility to live in service of others.

## Requirements

### Common Academic Program (CAP)

*credit hours will vary depending on courses selected	
First-Year Humanities Commons <sup>1</sup>	12
HST 103	West and the World
REL 103	Introduction to Religious and Theological Studies
PHL 103	Intro To Philosophy
ENG 100	Writing Seminar I <sup>2</sup>
Second-Year Writing Seminar <sup>3</sup>	0-3
ENG 200	Writing Seminar II
Oral Communication	3
CMM 100	Principles of Oral Communication
Mathematics	3
Social Science	3
Arts	3
Natural Sciences <sup>4</sup>	7
Crossing Boundaries	variable credit
Faith Traditions	
Practical Ethical Action	
Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

## CAP Components

### First-Year Humanities

The first-year Humanities component will introduce the seven student learning outcomes and develop appropriate disciplinary objectives as



part of the first-year courses in Religious Studies, Philosophy, History and English that create a foundation for student learning in the rest of the Common Academic Program and their majors. These courses will exhibit, at an introductory level, the value of humanistic inquiry and reflection as a means of advancing the seven learning outcomes. Particular emphasis will be placed on the diversity outcome. Collectively, these courses will introduce students to the concept that learning is a process of integrating knowledge within and across disciplines. To help students understand the relationship between disciplines and to begin to understand the importance of integrating knowledge across disciplines, the faculties of the departments offering these courses will develop other common elements, questions or themes to be considered in these courses. These courses challenge students to ask the question: “What does it mean to be human?” These courses will, when considered collectively, familiarize students with central concepts and texts of the Catholic intellectual tradition.

The CAP program will contain two writing courses, a first-year writing seminar and a second-year writing seminar. As part of the First-Year Humanities component of the CAP, students will enroll in either a first-year writing seminar or a first-year honors writing seminar. Many students will begin by taking the first-year writing seminar. This course focuses on personal and academic literacies, with an emphasis on expository writing and the development of college-level reading, writing, research and critical thinking skills as well as a process approach to writing. With its focus on personal and academic literacies, the first-year writing seminar addresses directly the question, “What does it mean to be human?” as it explores the relationship between reading/writing (or literacy) and being human. Based on placement criteria, some students will qualify to enroll in the first-year honors writing seminar. This course will also engage the question of what it means to be human in a manner fitting the context of a themed writing seminar (see description of second-year writing seminar below). Together, then, the first-year writing seminar and the first-year honors writing seminar will provide all incoming first-year students with a course in writing that supports multiple HIR outcomes and explores the question, “What does it mean to be human?” Students who complete the first-year honors writing seminar will not take the second-year writing seminar.

- Religious Studies
- Philosophy
- History
- Writing

## Second-Year Writing

The second-year writing seminar, taken by students who completed the first-year writing seminar, is a variable theme composition course focused on academic discourse, research, and argumentation. Students will further develop their reading, writing, research, and critical thinking abilities as they come into contact with the ways that various disciplines (at least three) engage a particular theme. In addition, by studying scholarship across disciplines students will develop rhetorical awareness about the arguments, approaches, and conventions of these disciplines. A focus throughout the course will be on enabling students to take a process approach to making effective arguments in a complex academic context.

## Oral communication

To enhance students' ability to communicate effectively, all students will complete three hours in oral communication, normally in their first or second year of study. The Oral Communication foundational course

will focus on the concepts of dialogue and debate, with the goals of engaging in constructive mutual dialogue in conversations and meetings; developing the ability to articulate, analyze, and defend a position in a public forum; understanding the differences between dialogue and debate; and understanding relative advantages and disadvantages of each mode of communication. With its focus on dialogue and debate, the course will assist students in the development of the skills necessary for learning, living, and working in communities. By developing the ability to engage in conversation that advances understanding, students will be better able to interact and collaborate with persons from diverse backgrounds and perspectives.

## Mathematics

To enhance quantitative reasoning skills, all students will complete three hours in mathematics. The particular course will vary based on the students' major and background in mathematics. The mathematics courses are most closely related to the *HIR* outcomes related to scholarship, practical wisdom and critical evaluation of our times.

## Social Sciences

Essential to life in the 21<sup>st</sup> century is an understanding of the relationship between individuals, groups and institutions. All students will complete three hours in the social sciences. The social science course will be a theme-based course that varies across sections but shares common learning outcomes. The course will use social science methods and social theory to critically examine a human issue or problem from at least three social science disciplinary perspectives (anthropology, economics, political science, psychology and sociology). The course will emphasize outcomes related to scholarship, critical evaluation of our times, and the diversity of the human world.

## Arts

To ensure that all students acquire a basic understanding of the arts as significant manifestations of diverse cultural, intellectual, aesthetic, and personal experiences, all students will complete a three hour component in the Arts. The Arts component may include courses from the Departments of Music, Visual Arts, English and the Theatre Program. Courses will assist students to develop skills and acquire experiences that enable them to understand, reflect upon, and value the creative process within the context of the arts. The requirement may be satisfied by taking studio and performance courses as well as historical studies courses. Students may satisfy the three hour requirement with one three hour course or a combination of one- and two-hour courses. Given the diversity of the Arts, the specific learning outcomes addressed will vary across courses.

## Natural Science

An understanding of many significant issues confronting our world today requires a basic understanding of science. Students must take two three-hour lecture courses in the physical or life sciences or computer science, at least one of which should be accompanied by a corresponding one-hour laboratory section. Lecture sections are either a pre-requisite or co-requisite to their correlative laboratory sections. Students are exposed to at least two of the five disciplines: biology, chemistry, computer science, geology, and physics. The science component actively challenges students to explore the scientific dimensions of complex, controversial or unresolved problems facing human society. It furthers the development of the outcomes related to scholarship, practical wisdom and critical evaluation of our times by challenging students to achieve an enriched

understanding of the scientific method by applying it to issues of broad public interest. The community outcome is enhanced through the team-based learning that occurs in the laboratory setting.

## Crossing Boundaries

The Crossing Boundaries component includes four courses (Faith Traditions, Practical Ethical Action, Inquiry and Integrative courses) that challenge students and faculty to link aspects of their own lives, majors, and careers to a broader world within and outside academia. As a Catholic, Marianist, comprehensive university, the University of Dayton is particularly well-suited to develop curricular programs that forge these links and to offer extracurricular experiences to help students reflect on and understand these links. These courses focus on faith traditions, practical ethical action, Inquiry and Integration. Collectively, these courses will strengthen the Catholic intellectual tradition in significant ways. This tradition in Catholic and Marianist higher education emphasizes the centrality of theology and philosophy, the importance of linking faith and reason, the integration of knowledge, and the application of that knowledge to personal and social situations in the world today. Collectively, these courses will build on our strengths as a comprehensive Marianist university by engaging students and faculty across disciplinary lines and across academic units in order to see the relationship between the practical and the theoretical and to understand issues in a more integrative and holistic perspective. The student learning outcomes related to faith traditions, diversity, practical wisdom, critical evaluation of our times, and vocation are particularly important for this set of courses.

**Faith Traditions:** The course on faith traditions is designed to encourage students to better understand, reflect on, and place their own religious beliefs and experiences in a broader historical or cultural context. Courses satisfying the faith traditions component may be offered by any department provided that the courses incorporate some of the ideas from the introductory religious studies course and that they develop students' ability to examine their own faith commitments and to participate in dialogue with other faith traditions. The courses will: 1) place religious traditions within their historical context; 2) examine their philosophical foundations or the internal logic of religious thought, language, and practice; 3) compare religious traditions by examining their philosophical foundations, historical origins, artistic expressions, canonical texts, and/or storied practices; or 4) examine a religious tradition with which students are unfamiliar (e.g., a non-Christian tradition).

**Practical Ethical Action:** The practical ethical action course is designed to cross the boundaries between the theoretical and the practical and between the liberal arts and the applied fields. It offers the opportunity for faculty to cross the boundaries of their own disciplines to dialogue with faculty from other disciplines in ways that enrich their own understanding of important ethical issues and that enrich the courses they offer to students. Courses satisfying the practical ethical action component may be offered by any department provided that the courses engage students in thick description and analysis of ethical issues using concepts central to the study of ethics such as justice, rights, natural law, conscience or forgiveness and that the courses provide sufficient normative content that allow students to reflect on value judgments and ethical reasoning and practical application. These courses will draw from relevant interdisciplinary knowledge as well as an understanding of the professions and social institutions. CAP

**Inquiry:** The Inquiry component of CAP requires that students select a course outside their own division to better understand the

ways of knowing found in other academic disciplines. The Inquiry course provides an opportunity for all academic units, particularly the professional schools, to develop courses for the CAP. The Inquiry course will serve as an introduction to key methods of investigation, interpretation, exploration, and ways of knowing. Taking a course outside one's major can broaden awareness of differing philosophies or analytic approaches, and it can offer new ways of conceiving of and resolving problems. The Inquiry course will provide students an opportunity to contrast inquiry in their own field with a different discipline's methods of inquiry. Some modes of inquiry engage experimentation and creative practice; other modes employ cognitive systems or analytical frameworks. Still other modes of inquiry investigate the complexity of systems, languages, or cultures. Exposure to modes of inquiry not typically used in the students' major prepares them to think critically about ways of acquiring, evaluating, and applying knowledge claims within their own discipline. For this reason, the Inquiry course will include a reflective and comparative component in which a student examines methods in his or her major field with those in the field of the Inquiry course.

**Integration:** The integration of knowledge has a long-standing position within the Catholic intellectual tradition and an increasingly important role in understanding contemporary social issues and problems. The Integrative course in the CAP requires that faculty develop, and students select, a course that transcends disciplinary boundaries and explicitly examines significant social issues or problems in a multidisciplinary or interdisciplinary framework. Collaborative, interdisciplinary efforts by faculty are encouraged but not required for this course. Courses offered by one faculty member that bring together different disciplinary perspectives to enhance students' understanding of significant issues may also be developed.

## Capstone

The ability of students to integrate the knowledge acquired in the undergraduate career, both within the major and in the Common Academic Program, is greatly enhanced by a capstone experience. All students will have a capstone course or experience in their major. The capstone will provide students the opportunity to engage, integrate, practice, and demonstrate the knowledge and skills they have developed in their major courses and which reflect learning outcomes associated with the *Habits of Inquiry and Reflection*. The capstone will provide students the opportunity to engage in the scholarship, activity and/or practice of their major field and further the students' understanding of their chosen vocation, career or profession. Students will present their work in a forum appropriate to their major. This course or experience will be designed by faculty in each major. It may, or may not be assigned credit hours.

## Advanced religious studies

As a Catholic and Marianist institution of higher education, the University regards religious studies and philosophy as having special roles in the undergraduate curriculum and in the attainment of University-wide learning outcomes. Students are expected to deepen their knowledge of the religious and philosophical traditions that inform the Catholic and Marianist education. Advanced study in these areas, especially when conducted through interdisciplinary courses, also assists students in constructing integrated knowledge of the central human questions examined in a liberal education. The fields of philosophy and religious studies, together with historical study are indispensable for students'

education in the Catholic intellectual tradition. Students will take courses beyond the 100 level in these fields to further their understanding of the resources that the Catholic intellectual tradition offers for their own personal, professional and civic lives and also for the just transformation of the social world. By requiring every student to take six hours of courses in the areas of religious studies or philosophy and three hours in history beyond the 100 level, the University expects students to engage in liberal learning that connects theory and practice and to draw upon the resources of the Catholic intellectual tradition as they consider how to lead wise and ethical lives of leadership and service.

Students will have flexibility in fulfilling these requirements. First, these courses will frequently focus on issues related to, and satisfy the criteria for the Faith Traditions, Practical Ethical Action, Inquiry and Integrative components of the CAP. Second, the criteria for these requirements are disciplinary-based in the fields of religious, philosophical and historical studies and therefore not limited to specific departments. Courses offered outside the Departments of Philosophy, Religious Studies and History may count towards the advanced religious studies, philosophy and history requirements if the courses draw extensively from those disciplinary perspectives and address in significant ways aspects of the Catholic intellectual tradition. Courses satisfying the religious studies component might examine the central beliefs, texts or practices of one or more religious traditions or movements; examine ethics as a central feature of a religious tradition including the use of Catholic social teaching as a resource, or; examine cultural expressions of religious identity or tradition as the central focus of theological or religious studies. Courses satisfying the advanced philosophical studies component might evaluate competing solutions to theoretical or ethical options in the present day, or draw on the philosophical resources of the Catholic intellectual tradition to address the challenges of their times. Courses satisfying the advanced historical studies component might engage students in the study and analysis of primary materials to further develop students' historical sensibilities in a way that illuminates the historical dimensions of *HIR* learning outcomes. The course could examine a historical topic drawing on the work of historians to show how interpretations of the past may change over time.

## Advanced philosophy

As a Catholic and Marianist institution of higher education, the University regards religious studies and philosophy as having special roles in the undergraduate curriculum and in the attainment of University-wide learning outcomes. Students are expected to deepen their knowledge of the religious and philosophical traditions that inform the Catholic and Marianist education. Advanced study in these areas, especially when conducted through interdisciplinary courses, also assists students in constructing integrated knowledge of the central human questions examined in a liberal education. The fields of philosophy and religious studies, together with historical study are indispensable for students' education in the Catholic intellectual tradition. Students will take courses beyond the 100 level in these fields to further their understanding of the resources that the Catholic intellectual tradition offers for their own personal, professional and civic lives and also for the just transformation of the social world. By requiring every student to take six hours of courses in the areas of religious studies or philosophy and three hours in history beyond the 100 level, the University expects students to engage in liberal learning that connects theory and practice and to draw upon the resources of the Catholic intellectual tradition as they consider how to lead wise and ethical lives of leadership and service.

Students will have flexibility in fulfilling these requirements. First, these courses will frequently focus on issues related to, and satisfy the criteria

for the Faith Traditions, Practical Ethical Action, Inquiry and Integrative components of the CAP. Second, the criteria for these requirements are disciplinary-based in the fields of religious, philosophical and historical studies and therefore not limited to specific departments. Courses offered outside the Departments of Philosophy, Religious Studies and History may count towards the advanced religious studies, philosophy and history requirements if the courses draw extensively from those disciplinary perspectives and address in significant ways aspects of the Catholic intellectual tradition. Courses satisfying the religious studies component might examine the central beliefs, texts or practices of one or more religious traditions or movements; examine ethics as a central feature of a religious tradition including the use of Catholic social teaching as a resource, or; examine cultural expressions of religious identity or tradition as the central focus of theological or religious studies. Courses satisfying the advanced philosophical studies component might evaluate competing solutions to theoretical or ethical options in the present day, or draw on the philosophical resources of the Catholic intellectual tradition to address the challenges of their times. Courses satisfying the advanced historical studies component might engage students in the study and analysis of primary materials to further develop students' historical sensibilities in a way that illuminates the historical dimensions of *HIR* learning outcomes. The course could examine a historical topic drawing on the work of historians to show how interpretations of the past may change over time.

## Advanced history

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## Diversity and Social Justice

As a Marianist university, the University has a special concern for the poor and marginalized and a responsibility to promote the dignity, rights and responsibilities of all persons and peoples. The University curriculum is responsible for contributing to this effort and does so throughout the Common Academic Program, but in a more focused way through a Diversity and Social Justice component. Every student will investigate human diversity issues within a sustained academic context by taking at least three credit hours of course work that have a central focus on one or more dimensions of diversity that are relevant to social justice. The course must have a central focus on one or more dimensions of human diversity on the basis of which systems, institutions, or practices that obstruct social justice have functioned. The dimensions may include, but are not limited to, race, gender, socioeconomic class, and sexual orientation. Courses may address diversity within the United States, in a global context, or both. Since the course uses a social justice framework, it will consider constructive responses to such injustice.

Courses approved to satisfy the Diversity and Social Justice component will build on earlier CAP courses addressing diversity including the First-Year Humanities courses, the Second-Year Writing Seminar, and the Social Science, Arts, Natural Science, and Oral Communication courses. The Diversity and Social Justice component may not double count with these courses, but may double count with courses taken to satisfy other CAP components or courses taken in the student's major.

## Approved Courses

Use links below or scroll down to view all CAP approved courses:

- First-Year Humanities (p. 93)
- Second-Year Writing Seminar (p. 93)
- Oral Communication (p. 93)
- Mathematics (p. 93)
- Social Science (p. 93)
- Arts (p. 93)
- Natural Sciences (p. 94)
- Crossing Boundaries - Faith Traditions (p. 94)
- Crossing Boundaries - Practical Ethical Action (p. 95)
- Crossing Boundaries - Inquiry (p. 95)
- Crossing Boundaries - Integrative (p. 96)
- Advanced Religious Studies (p. 97)
- Advanced Philosophical Studies (p. 97)
- Advanced Historical Studies (p. 97)
- Diversity and Social Justice (p. 98)

- Major Capstone Course or Experience (p. 98)

### First-Year Humanities

ASI 110	Development of Western Culture in a Global Context	7
ASI 120	Development of Western Culture in a Global Context	8
ENG 100	Writing Seminar I	3
ENG 100A	Writing Seminar 1A	2
ENG 100B	Writing Seminar 1B	2
ENG 200H	Writing Seminar II	3
HST 103	The West & the World	3
PHL 103	Introduction to Philosophy	3
REL 103	Introduction to Religious and Theological Studies	3

### Second-Year Writing Seminar

ENG 200	Writing Seminar II	3
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### Oral Communication

CMM 100	Principles of Oral Communication	3
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### Mathematics

MTH 114	Contemporary Mathematics	3
MTH 129	Calculus for Business	3
MTH 137	Calculus I with Review	4
MTH 148	Introductory Calculus I	3
MTH 168	Analytic Geometry & Calculus I	4
MTH 205	Mathematical Concepts II	3
MTH 207	Introduction to Statistics	3

### Social Sciences

CMS 316	Intercultural Communication	3
CMS 414	Global Communication	3
ECO 203	Principles of Microeconomics	3
ECO 204	Principles of Macroeconomics	3
POL 101	Global Politics	3
POL 331	Nationalism & Ethnopolitics	3
PSY 101	Introductory Psychology	3
PSY 341	Social Psychology	3
PSY 375	Psychology of the Arts	3
PSY 443	Psychology of Women	3
SOC 322	Sex Roles & Society	3
SOC 332	Sociology of Women	3
SOC 341	Self & Society	3
SOC 352	Community	3
SSC 200	Social Science Integrated	3

### Arts

ENG 203	Major British Writers	3
ENG 204	Major American Writers	3
ENG 205	Major World Writers	3



ENG 270	Reading & Writing in the American University	4
ENG 271	Technical Writing Laboratory	2
ENG 272	Writing & Research	3
ENG 301	Survey of Early English Literature	3
ENG 302	Survey of Later English	3
ENG 305	Survey of American Literature	3
ENG 322	Masterpieces of World Literature	3
ENG 333	Images of Women in Literature	3
ENG 334	Modern Men -- Images	3
ENG 335	African American Literature	3
ENG 336	Gender in Fiction	3
ENG 338	Images of Business	3
ENG 339	American Indian Literature	3
ENG 340	The Prison in Literature	3
ENG 341	Asian-American Literature	3
ENG 342	Literature & Environment	3
ENG 345	Colonial & Postcolonial Literature	3
ENG 346	Literature & Human Rights	3
ENG 353	Literature of the Renaissance	3
ENG 360	US Latina/Latino Literature	3
ENG 362	Shakespeare	3
MUS 201	Music In Concert	3
MUS 203	Sights & Sounds of Music	3
MUS 205	Music, Technology and Culture	3
MUS 223	Introduction to Music Technology	2
MUS 232	Integrating the Arts	2
MUS 303	Introduction to Musics of the World	3
MUS 304	History of American Music	3
MUS 306	History of American Jazz	3
MUS 307	Development of American Popular Song	3
MUS 327	Music in Film	3
MUS 352	Understanding Sacred Music & Worship in the Local Church	3
MUS 365	Music In Society	3
REL 352	Understanding Sacred Music in Worship in the Local Church	3
THR 105	Introduction to Theatre	3
VAD 211	Fundamentals of Visual Communication Design	3
VAE 232	Integrating Visual Culture	3
VAF 104	Foundation Drawing	3
VAF 203	Drawing Through the Process	3
VAF 225	Painting for Non-Majors	3
VAF 242	Ceramics II: Wheel Throwing	3
VAH 101	Introduction to the Visual Arts	3
VAH 129	Foundations in Art History	3
VAH 201	Survey of Art I	3
VAH 202	Survey of Art II	3
VAH 203	Survey of Art III	3
VAP 100	Darkroom Photography for Non-Majors	3
VAP 101	Foundation Photography	3
VAP 200	Digital Photography for Non-Majors	3
VAR 210	Visual Journal	3

**Natural Sciences**

BIO 101	General Biology I	3
BIO 101L	General Biology Laboratory I	1
BIO 151	Concepts of Biology I: Cell & Molecular Biology	3
BIO 151L	Concepts of Biology Laboratory: Cell & Molecular Biology	1
BIO 152	Concepts of Biology II: Evolution & Ecology	3
BIO 152L	Concepts of Biology Laboratory II: Evolution & Ecology	1
BIO 395	Global Environmental Biology	3
CHM 123	General Chemistry	3
CHM 123L	General Chemistry Laboratory	1
CHM 200	Chemistry & Society	3
CHM 304	Physical Chemistry	3
CPS 150	Algorithms & Programming I	4
EGR 320	Systems Design Scholars Seminar	3
GEO 103	Principles of Geography	3
GEO 109	Earth, Environment, and Society	3
GEO 109L	General Geology to earth, Environment and Society	1
GEO 115	Physical Geology	3
GEO 115L	Physical Geology Laboratory	1
GEO 116	Geological History of the Earth	3
GEO 204	Geology for Teachers	4
GEO 208	Environmental Geology	3
GEO 218	Geological Site Investigation for Engineers	3
HSS 305	Human Anatomy	3
HSS 305L	Human Anatomy Laboratory	1
PHY 105	Physical Science - Energy & the Environment	3
PHY 108	Physical Science of Light & Color	3
PHY 201	General Physics	3
PHY 206	General Physics I - Mechanics	3
PHY 250	Descriptive Astronomy	3-4
SCI 180	Foundations of Integrated Natural Science I- The Dynamic Universe	4
SCI 190	The Physical Universe	3
SCI 190L	The Physical Universe Laboratory	1
SCI 200	FinsII: Dynamic Universe	4
SCI 210	The Dynamic Earth	3
SCI 210L	The Dynamic Earth Laboratory	1
SCI 220	The World of Chemistry	3
SCI 220L	The World of Chemistry Laboratory	1
SCI 230	Organisms, Evolution & Environment	3
SCI 230L	Organisms, Evolution & Environment Laboratory	1
SCI 240	Organisms, Evolution & Health	3
SCI 240L	Organisms, Evolution & Health Laboratory	1
SCI 300	Computing in a Global Society	3
SCI 310	Earth & Sky	3
SEE 301	Global Change & Earth Systems	3

**Crossing Boundaries - Faith Traditions**

HST 305	Medieval Europe	3
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HST 307	Renaissance & Reformation	3
HST 315	Postwar Europe 1945-1990	3
HST 372	History of Religion in the United States	3
MUS 352	Understanding Sacred Music & Worship in the Local Church	3
REL 304	Hinduism	3
REL 306	Buddhism	3
REL 307	Judaism	3
REL 308	Islam	3
REL 315	The Gospels	3
REL 318	Studies in Paul	3
REL 323	History of Christianity I	3
REL 326	Protestant Christianity	3
REL 328	United States Catholic Experience	3
REL 352	Understanding Sacred Music in Worship in the Local Church	3
REL 356	The Christian Tradition of Prayer	3
REL 366	The Holocaust: Theological & Religious Responses	3
REL 377	The Inner Journey in Myth, Bible & Literature	3
REL 437	Significance of Jesus	3
REL 471	Women & Religion	3
REL 485	Lay Ministry	3
SOC 334	Religion & Society	3

#### Crossing Boundaries - Practical Ethical Action

ASI 371	Professional Ethics in a Global Community - Business Administration	3
ASI 372	Professional Ethics in a Global Community - Education	3
ASI 373	Professional Ethics in a Global Community - Engineering	3
ASI 374	Professional Ethics in a Global Community - Philosophical	3
ASI 375	Professional Ethics in a Global Community - Religious	3
CJS 303	Corrections	3
EDT 305	Philosophy & History of American Education	3
PHL 310	Social Philosophy	3
PHL 312	Ethics	3
PHL 313	Business Ethics	3
PHL 315	Medical Ethics	3
PHL 316	Engineering Ethics	3
PHL 317	Ethics & Modern War	3
PHL 318	Family Ethics	3
PHL 319	Information Ethics	3
PHL 321	Environmental Ethics	3
PHL 327	Philosophy of Peace	3
PHL 330	Philosophy of Science	3
PHL 334	Philosophy & Ecology	3
PHL 371	Philosophy & Human Rights	3
PHL 375	Ethical Theory	3
PHL 376	Philosophy & Revolution	3

PHL 377	Philosophy & Mass Media	3
PHL 383	Ethics of Scientific Research	3
POL 306	Public Policy Analysis	3
POL 371	Environmental Policy	3
REL 344	Christian Marriage	3
REL 358	Liberation Theology	3
REL 360	Christian Ethics	3
REL 363	Faith & Justice	3
REL 365	Christian Ethics & the Environment	3
REL 367	Christian Ethics & Health Care Issues	3
REL 368	Christian Ethics & the Business World	3
REL 369	Ethics by Design: Theological Ethics and Engineering	3
SEE 402	Sustainability Research II	3
SOC 323	Juvenile Justice	3
SOC 327	Criminology	3
SOC 331	Marriage & the Family	3
SOC 336	Organizations in Modern Society	3
SOC 410	Victimology	3
SWK 331	Death, Dying and Suicide	3

#### Crossing Boundaries - Inquiry

ACC 200	Introduction to Accounting	3
AMS 300	American Cultures	3
ANT 306	Culture & Power	3
ANT 315	Language & Culture	3
ANT 336	Epidemics, Power & the Human Condition	3
CEE 390	Environmental Pollution Control	3
CEE 422	Design & Construction Project Management	3
CHM 200	Chemistry & Society	3
CHM 313	Organic Chemistry	3
CJS 305	Criminal Law	3
CJS 315	Criminal Procedure	3
CMM 416	Development of Mass Media	3
ECE 203	Introduction to MATLAB Programming	1
ECO 203	Principles of Microeconomics	3
ECO 204	Principles of Macroeconomics	3
EDT 322	Perspectives on Education & Social Justice	3
EGR 103	Engineering Innovation	2
EGR 201	Engineering Mechanics	3
EGR 202	Engineering Thermodynamics	3
EGR 203	Electrical & Electronic Circuits	3
EGR 311	Principles of Nanotechnology	3
ENG 370	Report & Proposal Writing	3
ENG 371	Technical Communication	3
ENG 372	Business Communication	3
ENG 373	Medical Writing	3
FIN 250	Personal Finance	3
GEO 103	Principles of Geography	3
GEO 218	Geological Site Investigation for Engineers	3
GEO 450	Applied Geographic Information Systems	4

GEO 485	Geographic Information Systems Applications in Water Resources Planning & Management	4
HST 220	Survey of Ancient History	3
HST 260	Survey of Asian History	3
HST 280	Survey of Middle Eastern History	3
HST 320	European Military History	3
HST 321	Modern France	3
HST 322	History of England	3
HST 329	American and Middle East	3
HST 331	History of India	3
HST 332	Modern China & Japan	3
HST 335	History of South Asia	3
HST 342	Environmental History of the Americas	3
HST 343	History of Civil Engineering	3
HST 356	Comparative History of Women in the Third World	3
HST 357	Latin America in the Twentieth Century	3
HST 358	Social & Cultural History of Latin America	3
HST 359	History of American City Planning	3
HST 370	Economic & Business History of the United States	3
HST 374	Ireland & America	3
HST 398	History of Blacks in the United States, 1526-1900	3
HST 399	History of Blacks in the United States Since 1900	3
MIS 300	Survey of Management Information Systems	3
MIS 302	Systems Thinking	3
MKT 300	Survey of Marketing	3
OPS 300	Introduction to Operations & Supply Management	3
PHL 302	Symbolic Logic	3
PHL 304	Philosophy of Human Nature	3
PHL 306	Philosophy of Knowledge	3
PHL 307	Philosophy & Women	3
PHL 323	Philosophy & Literature	3
PHL 324	Philosophy & Film	3
PHL 325	Philosophy of Music	3
PHL 350	Classical Greek Philosophy	3
PHL 360	Existentialism	3
PHL 370	Political Philosophy	3
PHL 378	The Self Concept: Reality or Social Construct?	3
PHY 207	General Physics II - Electricity & Magnetism	3
PHY 232	The Physics of Waves	3
REL 378	Rel,Soc,Global Cinema	3
SCI 230	Organisms, Evolution & Environment	3
SCI 240	Organisms, Evolution & Health	3
SCI 300	Computing in a Global Society	3
SCI 310	Earth & Sky	3
SOC 204	Modern Social Problems	3
SOC 343	Mass Communication in Modern Society	3
SOC 351	Urban Sociology	3
SOC 353	Internet Community	3
SOC 435	Economy & Society	3
VAE 232	Integrating Visual Culture	3

**Crossing Boundaries - Integrative**

ASI 320	Cities & Energy	3
ASI 322	Cities & Suburbs: The Influence of Place (Social Science)	3
ASI 345	Special Topics in Social Science	1-3
ASI 347	Physics & Literature	3
ASI 495	Integrative Capstone Project, India Program	3
CPS 450	Design and Analysis of Algorithms	3
EDT 323	Historical Literacy & Historical Thinking	3
EDT 340	Educating Diverse Student Populations in Inclusive Settings	3
ENG 321	Reading Popular Music	3
ENG 466	TESOL Methods for Teaching English Language Learners	3
HSS 275	History of Physical Education & Sport	3
HSS 295	Nutrition & Health	3
HSS 360	Sport and Bodies	3
HST 341	Historical Perspectives on Science, Technology & Society	3
HST 343	History of Civil Engineering	3
HST 344	History of Science, Technology & the Modern Corporation	3
HST 349	Technology & the Culture of War	3
HST 355	American Urban History	3
HST 376	Social & Cultural History of the United States	3
MGT 490	Managing the Enterprise	3
MTH 219	Applied Differential Equations	3
MUS 205	Music, Technology and Culture	3
MUS 301	Music History & Literature I	3
MUS 302	Music History & Literature II	3
MUS 315	Music and Gender	3
MUS 328	History of the American Musical	3
PHL 314	Philosophy of Law	3
PHL 320	Philosophy of Art	3
PHL 322	Philosophy and Theatre/Dance: Performing Human Identity	3
PHL 330	Philosophy of Science	3
PHL 355	Asian Philosophy	3
PHL 363	African Philosophy	3
PHL 364	Race, Gender & Philosophy	3
PHL 377	Philosophy & Mass Media	3
PHL 379	Latin America Philosophy	3
PHL 380	Language & Our World	3
REL 372	Religion & Film	3
REL 373	Religion & Literature	3
REL 374	Religion & the Arts	3
REL 375	Religion & Science	3
SEE 250	Introduction to Sustainability, Energy & the Environment	3
SEE 303	Constructions of Place	3
SEE 401	Sustainability Research I	3
SOC 326	Law & Society	3
SOC 328	Racial & Ethnic Relations	3

SOC 330	Perspectives on Aging	3
SOC 333	Sociology of Sexualities	3
SOC 339	Social Inequality	3
SWK 307	Mental Health Services	3
SWK 330	Perspectives on Aging	3
SWK 335	Social Work & Environmental Justice	3
SWK 360	International Social Work	3
VAH 320	Latin American Art	3
VAH 330	Arts of Asia	3
VAH 360	Art History & Feminism	3
VAH 483	PostColonial and Global Art Histories	3

#### Advanced Religious Studies

REL 304	Hinduism	3
REL 306	Buddhism	3
REL 307	Judaism	3
REL 308	Islam	3
REL 315	The Gospels	3
REL 318	Studies in Paul	3
REL 323	History of Christianity I	3
REL 326	Protestant Christianity	3
REL 328	United States Catholic Experience	3
REL 344	Christian Marriage	3
REL 356	The Christian Tradition of Prayer	3
REL 358	Liberation Theology	3
REL 360	Christian Ethics	3
REL 363	Faith & Justice	3
REL 365	Christian Ethics & the Environment	3
REL 366	The Holocaust: Theological & Religious Responses	3
REL 367	Christian Ethics & Health Care Issues	3
REL 368	Christian Ethics & the Business World	3
REL 369	Ethics by Design: Theological Ethics and Engineering	3
REL 372	Religion & Film	3
REL 373	Religion & Literature	3
REL 374	Religion & the Arts	3
REL 375	Religion & Science	3
REL 377	The Inner Journey in Myth, Bible & Literature	3
REL 437	Significance of Jesus	3
REL 471	Women & Religion	3
REL 485	Lay Ministry	3

#### Advanced Philosophical Studies

ASI 371	Professional Ethics in a Global Community - Business Administration	3
ASI 372	Professional Ethics in a Global Community - Education	3
ASI 373	Professional Ethics in a Global Community - Engineering	3
ASI 374	Professional Ethics in a Global Community - Philosophical	3

ASI 375	Professional Ethics in a Global Community - Religious	3
EDT 305	Philosophy & History of American Education	3
PHL 301	Practical Logic	3
PHL 302	Symbolic Logic	3
PHL 304	Philosophy of Human Nature	3
PHL 306	Philosophy of Knowledge	3
PHL 307	Philosophy & Women	3
PHL 310	Social Philosophy	3
PHL 312	Ethics	3
PHL 313	Business Ethics	3
PHL 314	Philosophy of Law	3
PHL 315	Medical Ethics	3
PHL 316	Engineering Ethics	3
PHL 317	Ethics & Modern War	3
PHL 318	Family Ethics	3
PHL 319	Information Ethics	3
PHL 320	Philosophy of Art	3
PHL 321	Environmental Ethics	3
PHL 322	Philosophy and Theatre/Dance: Performing Human Identity	3
PHL 323	Philosophy & Literature	3
PHL 324	Philosophy & Film	3
PHL 325	Philosophy of Music	3
PHL 334	Philosophy & Ecology	3
PHL 350	Classical Greek Philosophy	3
PHL 355	Asian Philosophy	3
PHL 360	Existentialism	3
PHL 363	African Philosophy	3
PHL 364	Race, Gender & Philosophy	3
PHL 370	Political Philosophy	3
PHL 371	Philosophy & Human Rights	3
PHL 378	The Self Concept: Reality or Social Construct?	3
PHL 383	Ethics of Scientific Research	3
SEE 401	Sustainability Research I	3
SEE 402	Sustainability Research II	3

#### Advanced Historical Studies

AMS 300	American Cultures	3
ASI 120	Development of Western Culture in a Global Context	8
ASI 320	Cities & Energy	3
CMM 416	Development of Mass Media	3
HSS 275	History of Physical Education & Sport	3
HST 220	Survey of Ancient History	3
HST 251	American History to 1865	3
HST 252	American History Since 1865	3
HST 260	Survey of Asian History	3
HST 280	Survey of Middle Eastern History	3
HST 302	Identity in Ancient Greece	3
HST 305	Medieval Europe	3
HST 307	Renaissance & Reformation	3



HST 313	The Dual Revolution & its Consequences - Europe 1815-1914	3	ANT 336	Epidemics, Power & the Human Condition	3
HST 314	Modern Europe in Decline 1890-1945	3	ANT 368	Immigration & Immigrants	3
HST 315	Postwar Europe 1945-1990	3	CJS 336	Comparative Criminal Justice Systems	3
HST 319	The British Empire	3	EDT 222	Development in MC & AYA	3
HST 320	European Military History	3	EDT 340	Educating Diverse Student Populations in Inclusive Settings	3
HST 321	Modern France	3	ENG 333	Images of Women in Literature	3
HST 322	History of England	3	ENG 335	African American Literature	3
HST 326	Russia, The Soviet Union & Beyond 1860-Present	3	ENG 336	Gender in Fiction	3
HST 329	American and Middle East	3	ENG 339	American Indian Literature	3
HST 331	History of India	3	ENG 340	The Prison in Literature	3
HST 332	Modern China & Japan	3	ENG 341	Asian-American Literature	3
HST 333	Modern Middle East	3	ENG 345	Colonial & Postcolonial Literature	3
HST 334	History of the Palestinian-Israeli Conflict	3	ENG 346	Literature & Human Rights	3
HST 335	History of South Asia	3	ENG 353	Literature of the Renaissance	3
HST 337	History of Africa - 19th Century to Present	3	ENG 360	US Latina/Latino Literature	3
HST 339	Gandhi's India	3	ENG 466	TESOL Methods for Teaching English Language Learners	3
HST 341	Historical Perspectives on Science, Technology & Society	3	HSS 220	Adapted Physical Activity	3
HST 342	Environmental History of the Americas	3	HSS 275	History of Physical Education & Sport	3
HST 343	History of Civil Engineering	3	HSS 302	Global & Cultural Nutrition	3
HST 344	History of Science, Technology & the Modern Corporation	3	HSS 354	Sport in the Global Community	3
HST 346	History of American Aviation	3	HST 302	Identity in Ancient Greece	3
HST 349	Technology & the Culture of War	3	HST 334	History of the Palestinian-Israeli Conflict	3
HST 351	American Women's & Gender History	3	HST 351	American Women's & Gender History	3
HST 353	History of Women in European Societies	3	HST 353	History of Women in European Societies	3
HST 355	American Urban History	3	HST 355	American Urban History	3
HST 356	Comparative History of Women in the Third World	3	HST 365	American Films as History	3
HST 357	Latin America in the Twentieth Century	3	HST 374	Ireland & America	3
HST 358	Social & Cultural History of Latin America	3	MUS 303	Introduction to Musics of the World	3
HST 359	History of American City Planning	3	MUS 315	Music and Gender	3
HST 365	American Films as History	3	PHL 355	Asian Philosophy	3
HST 370	Economic & Business History of the United States	3	PHL 363	African Philosophy	3
HST 372	History of Religion in the United States	3	PHL 379	Latin America Philosophy	3
HST 374	Ireland & America	3	REL 358	Liberation Theology	3
HST 375	History of United States Foreign Relations	3	REL 360	Christian Ethics	3
HST 376	Social & Cultural History of the United States	3	REL 363	Faith & Justice	3
HST 382	History of Mexico	3	REL 378	Rel,Soc,Global Cinema	3
HST 383	History of the Caribbean	3	REL 471	Women & Religion	3
HST 398	History of Blacks in the United States, 1526-1900	3	SOC 328	Racial & Ethnic Relations	3
HST 399	History of Blacks in the United States Since 1900	3	SOC 330	Perspectives on Aging	3
MUS 301	Music History & Literature I	3	SOC 333	Sociology of Sexualities	3
MUS 302	Music History & Literature II	3	SOC 339	Social Inequality	3
VAH 320	Latin American Art	3	SOC 432	Structure of Privilege	3
VAH 360	Art History & Feminism	3	SWK 307	Mental Health Services	3
VAH 382	History of Photography I	3	SWK 330	Perspectives on Aging	3
VAH 480	Twentieth Century Art I	3	SWK 335	Social Work & Environmental Justice	3
VAH 483	PostColonial and Global Art Histories	3	SWK 360	International Social Work	3
			VAH 320	Latin American Art	3

**Diversity and Social Justice**

ANT 150	Cultural Anthropology	3
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**Major Capstone or Course Experience**

ACC 497	Professional Work Experience	1-6
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AMS 400	Interdisciplinary Research	3	MUS 480	Capstone Project Seminar	1
ASI 397	Capstone Seminar on Human Rights Advocacy	3	MUS 481	Capstone Project & Presentation	1
BIO 420	Seminar	1	OPS 485	Capstone Operations & Supply Management Project I	1
CEE 450	Civil Engineering Design	3	OPS 495	Capstone Operations & Supply Management Project II	5
CHM 496	Professional Practices Seminar	0	PHL 440	Seminar - Advanced Problems in Philosophy	3
CJS 447	Senior Seminar in Criminal Justice Studies	3	PHL 451	Seminar - Individual Philosophers	3
CME 431	Chemical Engineering Design II	3	PHL 461	Seminar - Contemporary Epistemology	3
CME 453L	Process Control Laboratory	2	PHL 462	Seminar - Contemporary Ethics	3
CMM 480	Communication Capstone Project & Presentation	3	PHL 463	Seminar - Contemporary Metaphysics	3
CPS 490	Capstone I	3	PHY 480	Capstone Project & Presentation	1
ECE 432L	Multidisciplinary Design II	3	POL 499	Political Science Capstone	3
ECO 490	Senior Seminar in Applied Economics	3	PSY 471	History of Psychology	3
ECT 490	Senior Project	3	PSY 478H	Honors Thesis	3
EDT 436	AYA Capstone Course	3	PSY 480	Senior Seminar in Psychology	3
EDT 465E	Internship & Practicum in Early Childhood Administration	6	PSY 499	Independent Research Seminar Capstone	3
EDT 471	Student Teaching- Foreign Languages P-12	12	REL 490	Capstone Seminar	3
EDT 474	Student Teaching- Middle Childhood	12	SOC 409	Senior Project	3
EDT 475	Student Teaching-Adolescent to Young Adult	12	THR 440	Problems in Theatre II	3
EDT 476	Student Teaching- Intervention Specialist: Mild/Moderate	12	THR 490	Special Problems in Theatre	3-5
ENG 490	Research Seminar-Literature	3	VAD 498	Senior/Professional Seminar - Graphic Design	3
ENG 498	Capstone I-Project	3	VAD 499	Portfolio and Paper - Graphic Design	1
ENG 499	Capstone II-Seminar	0	VAF 498	Senior/Professional Seminar- Fine Arts	3
FIN 479	Seminar in Bond Portfolio Management	3	VAF 499	Portfolio & Paper- Fine Arts	1
FIN 493	Seminar in Investments	3	VAH 485	Art History Seminar	3
GEO 477H	Honors Thesis	3	VAP 498	Senior/Professional Seminar- Photography	3
GEO 478H	Honors Thesis	3	VAP 499	Portfolio and Paper	1
GEO 498	Geological Research & Thesis	4	VAR 495	Senior Project Seminar	1
GNS 480	Senior Capstone	0	VAR 496	Project, Presentation & Paper	3
HSS 455	Selected Studies in Exercise Science	1-3	WGS 490	Senior Seminar in Women's & Gender Studies	3
HSS 465	Physical Therapy Seminar	3			
HSS 485	Sport Management Internship	3			
HSS 490	Exercise Science Internship - On Campus	2			
HSS 496	Medical Nutrition Therapy II	3			
HST 498	History Capstone Seminar	3			
IET 490	Senior Project	3			
INB 450	Seminar in Current Global Issues	3			
INS 499	Senior Capstone Seminar	3			
LNG 495	The Language Major in Professional Careers	1			
MCT 490	Mechanical Engineering Technology Senior Project	3			
MED 480	Pre-Medicine Capstone	1			
MEE 432L	Multidisciplinary Engineering Design Laboratory II	3			
MFG 490	Senior Project	3			
MGT 410	Senior Seminar in Experiencing Leadership	3			
MGT 430	Senior Seminar in Entrepreneurship	3			
MIS 465	MIS Project I-Analysis & Design in Teams	3			
MIS 475	MIS Project II-Design & Implementation in Teams	3			
MKT 450	Buyer Behavior & Market Analysis	6			
MKT 455	Marketing Planning & Strategy	3			
MTH 480	Math Capstone	3			
MUS 450	Degree Recital	0			

# College of Arts and Sciences

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Jason L. Peirce, Interim Dean  
 Donald L. Pair, Associate Dean  
 Carolyn Roecker Phelps, Associate Dean  
 Cynthia T. Shafer, Assistant Dean  
 Kimberly A. Trick, Assistant Dean  
 Timothy A. Wilbers, Assistant Dean  
 Maura S. Donahue, Director of Budget and Operations  
 Aaron E. Witherspoon, Academic Success Specialist

The College of Arts and Sciences is a distinctive learning community that forms the vital center of the University of Dayton. In the finest tradition of liberal education, the College is committed to excellence in the discovery, integration, dissemination and application of knowledge. Academic programs provide instruction in critical thinking and expression, social and cultural criticism, computation, scientific reasoning, the creative and performing arts, historical analysis, and religious and moral awareness. The College of Arts and Sciences takes as its mission the Marianist principle of educating the whole person and enabling all members of our learning community to fulfill their potential.

The faculty of the College of Arts and Sciences demonstrate connected learning and scholarship by integrating teaching, research and service. They engage students from across the University in this process through traditional and innovative approaches to learning. The faculty understand that the principles of liberal education emerge not only from the classroom, studio, and laboratory, but also from the many resources the students have within their reach: advisement, mentoring; campus ministry; social and professional clubs and societies; campus media and publications; fine arts events; and membership on departmental and campus-wide committees where students gain experience in working with others and contribute to the wider University community. Taken together, these dimensions of liberal education form the basis for lifelong intellectual, professional, and personal growth.

The College of Arts and Sciences affirms its commitment to the Catholic and Marianist tradition. In humanities and social science programs, in the physical and life sciences, and in the creative and performing arts, the College strives to ensure that its graduates are distinguished by their discernment and intellectual rigor, their broad base of learning, and their sense of moral responsibility. And through their participation in a vital learning community, the College ensures the graduates will be distinguished by their appreciation and respect for diversity, their commitment to service, and their ability to affect positively individual lives and the common good.

## Academic Programs

For detailed information on specific majors and minors, please visit the links below.

The major is defined as a block of courses totaling at least 24 semester hours of upper-level work in a single discipline. Transfer students are required to take a minimum of 12 upper-level semester hours in the major at the University of Dayton. Some departments may have additional requirements for transfer students. These additional requirements are defined specifically in the departmental listings.

Single-discipline and interdisciplinary minors are defined in the departmental listings. Transfer students must take a minimum of six upper-level semester hours in the minor at the University of Dayton. Some departments may have additional requirements for transfer students. These additional requirements are defined specifically in the departmental listings.

### The Bachelor of Arts is offered in:

- American Studies (p. 109)
- Art History (p. 113)
- Chemistry (p. 137)
- Communication (p. 146)
- Criminal Justice Studies (p. 158)
- Economics (p. 161)
- English (p. 165)
- French (p. 182)
- German (p. 182)
- History (p. 192)
- Human Rights Studies (p. 249)
- International Studies (p. 199)
- Mathematics (p. 204)
- Music (p. 213)
- Philosophy\* (p. 236)
- Political Science (p. 248)
- Psychology (p. 261)
- Religious Studies (p. 267)
- Sociology\* (p. 274)
- Spanish (p. 183)
- Theatre (p. 281)
- Visual Arts (p. 114)
- Women's and Gender Studies (p. 284)

\* Major programs offered in India in conjunction with the Marianists.

### The Bachelor of Science is offered in:

- Applied Mathematical Economics (p. 206)
- Biochemistry (p. 139)
- Biology (p. 129)
- Chemistry (p. 138)
- Computer Information Systems (p. 152)
- Computer Science (p. 153)
- Environmental Biology (p. 131)
- Environmental Geology (p. 176)
- Geology (p. 177)
- Mathematics (p. 204)
- Medicinal-Pharmaceutical Chemistry (p. 141)
- Physical Science (p. 242)
- Physics (p. 243)
- Physics-Computer Science (p. 244)
- Pre dentistry (p. 257)
- Premedicine (p. 258)
- Psychology (p. 262)

### Other programs leading to the bachelor's degree:

- Visual Arts Education (B.F.A.) (p. 112)
- Fine Arts (B.F.A.) (p. 112)
- General Studies (B.G.S.) (p. 174)
- Graphic Design (B.F.A.) (p. 114)
- Music Composition (B.M.) (p. 217)
- Music Education (B.M.) (p. 213)
- Music Performance (B.M.) (p. 221)
- Music Therapy (B.M.) (p. 222)
- Photography (B.F.A.) (p. 112)

### Established Interdisciplinary Majors

American Studies (p. 109), Criminal Justice Studies (p. 158), International Studies (p. 199), Premedicine (p. 258), Pre dentistry (p. 257), and Women's and Gender Studies (p. 284) are present examples of established interdisciplinary majors. Such programs are established by interdisciplinary committees and administered by the program directors.

### Individually Designed Interdisciplinary Majors

Students demonstrating extraordinary interest, special skills or needs, and sound academic status may initiate individually designed majors. Students carry the responsibility to find a faculty mentor or advisor for such majors. All University and College requirements for the Bachelor of Arts or Bachelor of Science degree must be fulfilled. The degree received will be a Bachelor of Arts or Science in Interdisciplinary Studies. Candidacy for the Bachelor of Arts or Science in Interdisciplinary Studies must be declared no later than the last semester of the junior year. Long-range plans for such majors must be submitted to the appropriate chairpersons and the dean for final approval. Plans may be altered with appropriate supporting rationale and the approval of the chairperson and dean.

## General Requirements for all Bachelor of Arts Programs

A minimum of 124 semester hours of approved coursework must be presented for the B.A. At least 48 semester hours must be completed at the 300-400 level. For limitations on credit and restrictions on courses, consult the chairperson or the dean. No more than 45 hours of the minimum 124 hours may be completed in a student's major discipline.

### Introduction to the University

In the first semester, students take a course that introduces them to the University and to their major field of study. Undeclared students take specific sections of this course.

### Major Concentration

Most major programs require between 30 and 45 semester hours. For department or program requirements, consult program schedules or the department chairperson or program director.

### Liberal Studies Curriculum

Every student will complete the Liberal Studies Curriculum. This Curriculum provides students with a breadth of study and experiences in the humanities, the creative and performing arts, the social sciences, and the natural sciences. It complements specialized study in a major and presupposes, builds upon and enhances the University's Common Academic Program (CAP). Where appropriate, credits in the Liberal

Studies Curriculum may apply to other requirements but no more than six hours may be in the departmental major concentration. The Liberal Studies Curriculum includes:

### Philosophy and Religious Studies

Students complete 12 semester hours including a course in philosophy and a course in religious studies as part of the CAP First-Year Humanities Commons requirement, and two additional CAP Advanced Studies approved courses in philosophy and/or religious studies.

### History

Students complete 6 semester hours including a course as part of the CAP First-Year Humanities Commons and one additional CAP Advanced Studies approved course in historical study.

### Literature

Students complete 3 semester hours in literature selected from a list of approved courses.<sup>1</sup>

### Creative and Performing Arts

Students complete 3 semester hours in theory, appreciation, or history of visual arts, music, or theater selected from a list of approved courses; or complete 3 semester hours in production and performance selected from a list of approved courses.<sup>2</sup>

### L2 Proficiency:

(Proficiency in a language other than English) Students demonstrate basic practical communication in a language other than English in one of three ways:

1. Students may choose to demonstrate proficiency equivalent to the completion of the 201 level by examination (Zero semester hours).  
or
2. Students may choose to demonstrate proficiency equivalent to the completion of the 141 level by examination, and one of the following four sub-options matching the language course at the 141 level (Zero to three semester hours):
  - a. 201 level language course
  - b. Approved study abroad/intercultural experience
  - c. Approved service learning experience
  - d. Approved Contextual Course.<sup>3</sup>
 or
3. Students may choose to demonstrate proficiency by completion of a language course at the 141 level and any necessary prerequisites, and one of the following four sub-options matching the language course at the 141 level (four to eleven semester hours):
  - a. 201 level language course
  - b. Approved study abroad/intercultural experience
  - c. Approved service learning experience
  - d. Approved Contextual Course.<sup>3</sup>

No credit is awarded through the proficiency examination. The range of semester hours to complete the L2 requirement in Arabic, Chinese and Hindi is zero to twelve.

### Social Sciences

Students complete 12 semester hours including two courses at the introductory level from at least two different traditional disciplines:

ANT 150	Cultural Anthropology	3
ECO 203	Principles of Microeconomics	3



POL 101	Global Politics	3
or POL 201	The American Political System	
PSY 101	Introductory Psychology	3
SOC 101	Principles of Sociology	3
or SOC 204	Modern Social Problems	

One course at the 300-400 level in one of the disciplines in which an introductory course was taken, and one additional course from any of the traditional disciplines or from the list of courses approved for social science. (Students in the E-11 program may take two approved courses in the School of Education).

### Mathematics

Students complete 3 semester hours selected from courses in the Department of Mathematics (MTH 205 excluded).

### Natural Sciences

Students complete a sequence of 3 lecture courses with 2 accompanying laboratories in the Integrated Natural Science Sequence for a total of 11 semester hours. Students who wish to do more advanced study in science may complete 9 semester hours in science courses approved for majors in the departments of biology, chemistry, geology, and physics and 2 sem. hrs. of accompanying laboratories in lieu of the Integrated Natural Science Sequence.

<sup>1</sup> Courses for Literature are as follows:

CLA 350	Classical Literature in Translation	3
ENG 151	Introduction to Literature	3
ENG 203	Major British Writers	3
ENG 204	Major American Writers	3
ENG 205	Major World Writers	3
ENG 210	Poetry	3
ENG 230	Topics in Literature	1-6
ENG 301	Survey of Early English Literature	3
ENG 302	Survey of Later English	3
ENG 305	Survey of American Literature	3
ENG 306	Survey of Continental Literature	3
ENG 317	Contemporary Poetry	3
ENG 319	Contemporary Fiction	3
ENG 320	Contemporary Drama	3
ENG 321	Reading Popular Music	3
ENG 322	Masterpieces of World Literature	3
ENG 323	Literature of the Christian Tradition	3
ENG 324	The Novel	3
ENG 325	Science Fiction	3
ENG 326	Sport & Literature	3
ENG 327	Studies in Popular Fiction	3
ENG 328	American Nobel Authors	3
ENG 329	Short Story	3
ENG 330	Development of Drama	3
ENG 332	Studies in Literature & Film	3
ENG 333	Images of Women in Literature	3
ENG 334	Modern Men -- Images	3
ENG 335	African American Literature	3
ENG 336	Gender in Fiction	3

ENG 337	Studies in Folklore	3
ENG 338	Images of Business	3
ENG 339	American Indian Literature	3
ENG 340	The Prison in Literature	3
ENG 343	Literature of the Fifties	3
ENG 344	Literature of the Sixties	3
ENG 345	Colonial & Postcolonial Literature	3
ENG 348	Modern Irish Literature	3
ENG 350	European Literature of Antiquity	3
ENG 351	European Literature of Middle Ages	3
ENG 353	Literature of the Renaissance	3
ENG 354	Literature of the Enlightenment	3
ENG 355	Literature of the Romantic Age	3
ENG 356	European Literature of the 19th Century	3
ENG 357	European Literature of the Early 20th Century	3
ENG 358	Contemporary Literature of Europe	3
ENG 360	US Latina/Latino Literature	3
ENG 362	Shakespeare	3
ENG 363	Shakespeare's Worlds	3
ENG 380	Studies in Literature	1-6
ENG 383	Tragic Dilemma	3
ENG 384	Christianity & Modern Poetry	3
ENG 385	Religion & Literature	3
ENG 405	Chaucer	3
ENG 407	Medieval English Literature	3
ENG 410	Early Renaissance Literature	3
ENG 414	Later Renaissance Literature	3
ENG 431	Milton	3
ENG 433	Studies in Neo-Classical Literature	3
ENG 438	English Romanticism	3
ENG 444	Studies in 19th Century English Literature	3
ENG 448	20th Century British Literature	3
ENG 451	American Romanticism	3
ENG 453	American Realism & Naturalism	3
ENG 455	20th Century American Literature	3
ENG 482	Modern Poetry	3
FRN 350	French Literature in Translation	3
FRN 352	Old World Meets New (ENG)	3
FRN 360	Explication De Textes	3
FRN 361	Survey of French Literature I	3
FRN 362	Survey of French Literature II	3
FRN 381	History of French Cinema	3
FRN 450	French Literature	3
FRN 452	Old World Meets New (FRN)	3
GER 350	German Literature & Civilization	3
GER 361	Survey of German Literature I	3
GER 362	Survey of German Literature II	3
GER 450	German Literature	3
ITA 361	Survey of Italian Literature I	3
ITA 362	Survey of Italian Literature II	3
SPN 350	Hispanic Literature in Translation	3
SPN 361	Survey of Spanish Literature I	3

SPN 362	Survey of Spanish Literature II	3
SPN 363	Survey of Spanish-American Literature I	3
SPN 364	Survey of Spanish-American Literature II	3
SPN 450	Topics in Spanish Literature	3
SPN 451	Topics in Spanish-American Literature	3
SPN 471	Topics in Spanish Literature of the Twentieth Century	3
SPN 472	Topics in Spanish-American Literature of the Twentieth Century	3

<sup>2</sup> Courses for Creative and Performing Arts are as follows:

ASI 214	Dramatic Kinesics in a Foreign Language	1
ASI 341	Special Topics in Arts Study	1-3
CMM 311	Studies in Oral Performance	3
CMM 331	Feature Writing	3
CMM 332	Publication Design	3
CMM 333	Free Lance Writing	3
CMM 341	Audio Production	3
CMM 342	Fundamentals of Video Production	3
CMM 343	Scriptwriting for Electronic Media	3
CMM 344	Multimedia Design & Production I	3
CMM 351	Public Speaking	3
CMM 442	Advanced Television Production	3
CMM 444	Multimedia Design & Production II	3
CMM 449	Topics in Electronic Media	3
ENG 282	Introduction to Writing Poetry	3
ENG 284	Introduction to Writing Fiction	3
ENG 286	Introduction to Writing Drama	3
ENG 308	Intermediate Poetry Workshop	3
ENG 310	Intermediate Fiction Workshop	3
ENG 312	Advanced Writing of Drama	3
ENG 331	Studies in Film	3
ENG 382	Mozart's Operas	3
MUS 110	Fundamentals of Music	2
MUS 111	Theory of Music I	2
MUS 112	Theory of Music II	2
MUS 113	Aural Skills I	2
MUS 114	Aural Skills II	2
MUS 115	Music in Theory & Practice	3
MUS 116	Music in Theory & Practice	3
MUS 191	Voice Class	2
MUS 195	Beginning Guitar Class I	1
MUS 196	Group Piano I	1
MUS 201	Music In Concert	3
MUS 203	Sights & Sounds of Music	3
MUS 205	Music, Technology and Culture	3
MUS 295	Beginning Guitar Class II	1
MUS 301	Music History & Literature I	3
MUS 302	Music History & Literature II	3
MUS 303	Introduction to Musics of the World	3
MUS 304	History of American Music	3
MUS 305	African-American Sacred Music	3

MUS 306	History of American Jazz	3
MUS 307	Development of American Popular Song	3
MUS 309	Opera History & Literature	3
MUS 310	Mozart's Operas	3
MUS 328	History of the American Musical	3
MUS 399	Performance Studies	1-2
MUS 491	University Orchestra	1
MUS 492	Symphonic Wind Ensemble	1
MUS 493	University Chorale	1
MUS 494	Dayton Jazz Ensemble	1
MUS 499	Performance Studies	4
THR 100	Theatre Laboratory	1-3
THR 105	Introduction to Theatre	3
THR 201	Basic Dance for the Performing Artist	2-3
THR 202	Stage Makeup	2
THR 203	Technical Production	3
THR 251	Beginning Tap Dance	2
THR 261	Beginning Jazz Dance	2-3
THR 271	Beginning Ballet	2-3
THR 300	Theatre Laboratory	1-3
THR 301	Intermediate Dance for the Performing Artist	2
THR 303	Scene Painting	3
THR 305	Theatre Stagecraft	3
THR 307	Theatre Lighting	3
THR 310	Acting I	3
THR 312	Film & Television Acting	3
THR 320	Movement & Voice for the Stage	3
THR 323	Acting II	3
THR 325	Theory & Criticism of the Stage I	3
THR 326	Theory & Criticism of the Stage II	3
THR 330	Concepts of Scene Design	3
THR 344	Acting/Directing for Musical Theatre	3
THR 351	Intermediate Jazz Dance	2
THR 361	Intermediate Jazz Dance	2
THR 371	Intermediate Ballet	2
VAD 211	Fundamentals of Visual Communication Design	3
VAF 104	Foundation Drawing	3
VAF 112	Foundation 2-D Design	3
VAF 117	Foundation 3-D Design	3
VAF 203	Drawing Through the Process	3
VAF 225	Painting for Non-Majors	3
VAF 226	Painting I	3
VAF 228	Watercolor I	3
VAF 232	Sculpture I	3
VAF 240	Ceramics I	3
VAF 242	Ceramics II: Wheel Throwing	3
VAF 253	Printmaking I	3
VAF 325	Figure Painting	3
VAH 101	Introduction to the Visual Arts	3
VAH 129	Foundations in Art History	3
VAH 201	Survey of Art I	3
VAH 202	Survey of Art II	3

VAH 203	Survey of Art III	3
VAH 320	Latin American Art	3
VAH 330	Arts of Asia	3
VAH 350	Western Architecture	3
VAH 360	Art History & Feminism	3
VAH 370	Nineteenth Century Art I	3
VAH 382	History of Photography I	3
VAH 383	History of Graphic Design	3
VAP 100	Darkroom Photography for Non-Majors	3
VAP 101	Foundation Photography	3
VAP 200	Digital Photography for Non-Majors	3
VAR 210	Visual Journal	3
VAR 220	Visual Resources	3

<sup>3</sup> Contextual courses may be General Education approved and used to satisfy Cluster and/or major or minor requirements. The contextual courses are as follows for each of the matching languages:

#### Arabic (ARA)

ANT 315	Language & Culture	3
CMS 316	Intercultural Communication	3
CMS 414	Global Communication	3
HST 333	Modern Middle East	3
HST 334	History of the Palestinian-Israeli Conflict	3
HST 354	History of Women & Gender in the Middle East	3
HST 356	Comparative History of Women in the Third World	3
HST 493	Seminar in Middle Eastern History	3
PHL 351	Medieval Philosophy	3

#### Chinese (CHI)

ANT 315	Language & Culture	3
CMS 316	Intercultural Communication	3
CMS 414	Global Communication	3
ENG 341	Asian-American Literature	3
HST 330	History of East Asia to 1800	3
HST 332	Modern China & Japan	3
PHL 355	Asian Philosophy	3

#### French (FRN)

ANT 315	Language & Culture	3
CMS 316	Intercultural Communication	3
CMS 414	Global Communication	3
ENG 353	Literature of the Renaissance	3
ENG 407	Medieval English Literature	3
HST 383	History of the Caribbean	3
POL 320	Comparative Politics: Western Europe	3
THR 415	History of the Theatre I	3
THR 425	History of Theatre II	3

#### German (GER)

ANT 315	Language & Culture	3
CMS 316	Intercultural Communication	3
CMS 414	Global Communication	3
POL 320	Comparative Politics: Western Europe	3
THR 415	History of the Theatre I	3
THR 425	History of Theatre II	3

#### Hindi (HND)

ANT 315	Language & Culture	3
CMS 316	Intercultural Communication	3
CMS 414	Global Communication	3
HST 356	Comparative History of Women in the Third World	3
THR 415	History of the Theatre I	3

#### Italian (ITA)

ANT 315	Language & Culture	3
CMS 316	Intercultural Communication	3
CMS 414	Global Communication	3
ENG 353	Literature of the Renaissance	3
THR 415	History of the Theatre I	3
VAH 450	Italian Renaissance Art	3

#### Latin (LAT)

HST 220	Survey of Ancient History	3
HST 303	History of the Roman Republic & Empire	3
PHL 351	Medieval Philosophy	3
THR 415	History of the Theatre I	3
THR 425	History of Theatre II	3

#### Russian (RUS)

ANT 315	Language & Culture	3
CMS 316	Intercultural Communication	3
CMS 414	Global Communication	3
HST 326	Russia, The Soviet Union & Beyond 1860-Present	3
POL 321	Comparative Politics: Russia & the New States	3

#### Spanish (SPN)

ANT 315	Language & Culture	3
ANT 352	Cultures of Latin America	3
CMS 316	Intercultural Communication	3
CMS 414	Global Communication	3
ENG 360	US Latina/Latino Literature	3
HST 357	Latin America in the Twentieth Century	3
HST 358	Social & Cultural History of Latin America	3
HST 382	History of Mexico	3
HST 383	History of the Caribbean	3
HST 384	Economic History of Latin America	3
PHL 379	Latin America Philosophy	3
SOC 368	Immigration & Immigrants	3

## Summary of Requirements for the B.A.

Major	30-45
<b>Liberal Studies Curriculum <sup>1</sup></b>	
Philosophy and Religious Studies	12
History	6
Literature	3
Creative and Performing Arts	3
L2 Proficiency (Proficiency in a language other than English)	0-11
Social Sciences	12
Mathematics	3
Natural Sciences	11

English Composition and Oral Communication	3-9
Introduction to the University	0-1
Electives to total 124 hours	

- <sup>1</sup> For specifics of the requirement, please refer to the Catalog section: College of Arts and Sciences - General Requirements for all Bachelor of Arts Programs.

## General Requirements for all Bachelor of Science Programs

A minimum of 120 semester hours of approved coursework must be presented for the B.S. For limitations on credit and restrictions on courses, consult the chairperson or the dean. For departmental or program requirements, consult program schedules or the department chairperson or program director.

Major Concentration (with at least 24 semester hours at 300-400 level).	30-60
Breadth Requirement (See Distribution Table below.)	44-50
Program Requirements and General Electives: Electives should be approved by the chairperson or dean since some restrictions exist.	10-40
Common Academic Program (CAP): These courses may also be counted for other requirements where applicable including Major Concentration, Breadth Requirement, Program Requirements and General Electives	43-61

### Distribution Table for Breadth Requirements

Courses taken to fulfill the breadth requirement should be external to the major concentration. Students electing courses in any department should be aware that some introductory or background knowledge may be expected of them even when no specific prerequisite course is listed.

Natural Sciences: Selected from Biology, Chemistry, Geology, and Physics courses with accompanying laboratories. (Includes 7 hours CAP Natural Science.)	8
Mathematics, Computer Science: At least 3 semester hours must be in Mathematics, the course(s) to be determined by placement and major program. (Includes 3 hours of CAP Mathematics and College of Arts and Sciences Mathematics Competency.)	6
Social and Behavioral Sciences: Anthropology, Economics, Political Science, Psychology, Sociology. Up to 3 of the 6 semester hours of social and behavioral sciences may, with the approval of the chairperson of the major department or the director of the program, be taken in applied social and professional studies: Criminal Justice Studies, Education, Management, Marketing, Military Science, Social Work, and appropriate courses in ASI, AMS, and CMS. (Includes 3 hours CAP Social Science.)	6
Humanities: American Studies, Communication, English, History, Humanities Studies, Languages, Music, Philosophy, Religious Studies, Visual Arts, and, with the approval of the chairperson of the major department or director of the program, appropriate courses in ASI. (The CAP First-Year Humanities Commons, Second-Year Writing, and Oral Communication courses do not fulfill this requirement.)	9
Philosophy and Religious Studies	12

College of Arts and Sciences' Composition and Oral Communication 3-9  
Competencies: Each student should demonstrate competence in composition, and oral communication. This competence may be demonstrated through coursework, or advanced standing. Please refer to the Catalog section: College of Arts and Sciences – Degree Requirements.

## Degree Requirements

1. To be awarded the bachelor's degree by the College of Arts and Sciences, it is necessary to complete all the requirements listed for one of the academic programs offered by the College.

2. A maximum of four semester hours of general activities courses, a maximum of two semester hours of physical education activities courses, a maximum of ten semester hours of MIL courses, and a maximum of six hours of applied courses may be counted in the semester hours required for the degree. In addition, a maximum of one semester hour from ASI 150, VAR 100, or an equivalent course may be counted in the semester hours required for the degree.

3. The final 30 semester hours must be earned at the University of Dayton. Furthermore, a minimum of 12 semester hours of course work at the 300 and 400 level in the major must be completed at the University.

4. The standard grade point average of at least 2.0 must be achieved in the major field, in the minor field, and in the total program. In the Bachelor of Fine Arts and Bachelor of Music Programs, a 2.0 cumulative grade point average is required in the nonprofessional courses as well as in the professional courses.

5. The College of Arts and Sciences' Competencies of Composition, Oral Communication, and Mathematics, are required for all bachelor degrees within the College.

### Composition Competencies

The College of Arts and Sciences' composition competency requirement is satisfied by completing ENG 100 (or ENG 100A and ENG 100B) and ENG 200, or ENG 200H, or ASI 120 with a grade of C- or higher. Students admitted to the University Honors program and students with sufficiently high verbal scores on the SAT and ACT are placed in ENG 200H. ENG 200H is a one-semester course which satisfies the University's Common Academic Program requirement in composition. Students who are placed in ENG 200H do not receive credit for ENG 100 but are free to take elective course work in place of the waived First-Year Humanities Commons composition.

All incoming first-year students are placed in ENG 100 unless:

- they are designated as Honors - placed in ENG 200H
- they are placed in ENG 200H (receive EM credit for ENG 100). For a score of 5 they receive EM credit for ENG 100 and ENG 1xx.
- they have an SAT (VB) score of 750 or above, or ACT (EN) of 35 or above - exempt from taking English composition
- they have an SAT (VB) score below 450, or ACT (EN) below 17 - placed in ENG 100A and ENG 100B
- they are in the CORE program (ASI 120 counts as ENG 200H)

### Oral Communication Competencies

The College of Arts and Sciences' oral communication competency requirements are satisfied by completing the University's Common



Academic Program requirement of CMM 100 Principles of Oral Communication, and with a grade of C- or higher.

### Mathematics Competencies

In order to graduate, students are required to satisfy the Common Academic Program Mathematics requirement. The College of Arts and Sciences requires a grade of C- or better, or earn EM credit based on AP examinations for MTH 168 Analyt Geom & Calc or MTH 207 Intro to Statistics, or earn appropriate transfer credit, for any one of the Common Academic Program mathematics courses.

MTH 114	Contemporary Mathematics	3
MTH 129	Calculus for Business	3
MTH 137	Calculus I with Review	4
MTH 138	Calculus I with Review	4
MTH 148	Introductory Calculus I	3
MTH 149	Introductory Calculus II	3
MTH 168	Analytic Geometry & Calculus I	4
MTH 169	Analytic Geometry & Calculus II	4
MTH 169H	Analytic Geometry & Calculus II	4
MTH 205	Mathematical Concepts II	3
MTH 207	Introduction to Statistics	3
MTH 218	Analytic Geometry & Calculus III	4

6. It is the responsibility of the student to file his or her Candidate for Graduation form.

## L2 Entrance Requirement

Any student admitted to the College of Arts and Sciences must have had two years of high school study of a language other than English (L2) or make up the deficit at the University. The deficit may be made up by successful completion of one of the following courses or the equivalent:

ARA 141	Basic Proficiency in Arabic II	4
CHI 141	Basic Proficiency in Mandarin Chinese II	4
FRN 141	Basic Proficiency in French II	4
GER 141	Basic Proficiency in German II	4
ITA 141	Basic Proficiency in Italian	4
LAT 141	Basic Proficiency in Latin II	4
RUS 141	Basic Proficiency in Russian II	4
SPN 141	Basic Proficiency in Spanish II	4

### Proficiency in L2

The College of Arts and Sciences strongly encourages its students to acquire the highest level of L2 proficiency. Students may show proficiency by demonstration of basic practical communicative competence in a language other than English. Proficiency for modern languages includes the following four skills:

- **Speaking:** Ability to handle successfully a limited number of interactive, task-oriented, and social situations. Can ask and answer questions, initiate and respond to simple statements, and maintain face-to-face conversation, although with hesitancy and linguistic inaccuracies. Speech is generally understood by native speakers used to interacting with language learners.
- **Writing:** Ability to write simple messages and descriptions on familiar topics, to provide biographical information, and to express interests

and preferences by recombining learned vocabulary and structures. Some effort may be required from native speakers to understand the written messages.

- **Listening:** Comprehension of main idea and some supporting detail in passages of up to 250 words of everyday speech on familiar topics in a context that provides significant support for the message.
- **Reading:** Comprehension of main idea and supporting detail in contextualized written passages of up to 600 words in which a generally familiar, everyday topic is discussed.

Students entering the University have the opportunity to demonstrate the defined levels of proficiency by passing a University placement/proficiency examination. Any student who has not achieved proficiency as determined by this examination upon entry can choose from the following options to reach proficiency:

- course work at the University of Dayton
- course work elsewhere
- an individual study program
- study abroad
- an immersion experience

The Department of Languages offers the following possible sequences of language courses:

- **Basic Proficiency**  
For students who have never studied the language previously or who demonstrate no functional ability: 101-141 (8 sem. hrs.) in Arabic, Chinese, French, German, Italian, Latin, Russian and Spanish.
- **Accelerated sequence**  
For students with previous language study or experience who demonstrate some functional ability on the placement/proficiency examination: 131-141 (6 sem. hrs.) available in French, German, Latin and Spanish.
- **Capstone course (201)**  
For students with significant language study or experience: (4 sem. hrs.) available in all languages.

Students choosing to complete the Liberal Studies Curriculum using Latin as their language will be required to demonstrate proficiency in reading and translation only.

Students whose first language is not English demonstrate L2 proficiency by satisfying the University Common Academic Program requirements in composition and oral communication.

## Internship Program

The Internship Program is an educational work experience with an outside agency, in which a full-time student registers for on-the-job work performed without direct supervision by academic personnel. Such work can be performed in a variety of areas; however, the general purpose of all internships is to serve as transition between the world of study and the world of work.

Normally a departmental internship director or another designated faculty member will make all contacts with prospective agencies for placing students as interns. While students themselves may initiate contacts at possible sites, all sites must be ruled acceptable by the director before an internship may begin.

In order to accomplish the general purpose of an internship, the student must adhere to the following requirements:

- To be eligible for an internship, a student must be in good standing at the University of Dayton and have successfully completed course work in areas appropriate to the internship sought.
- An intern may receive no more than six semester hours of credit in any semester for internship.
- No more than twelve semester hours of work experience credit in any kind of internship or work experience program can be accepted toward a baccalaureate degree.
- The student intern will submit a daily log and a written report to the internship director at the conclusion of the internship.

Other procedures and requirements in addition to those mandated by the College may be imposed by departments for individual programs to meet the specific nature of a given internship.

Interested students should see the internship directors in their respective departments for further details.

## Mini Courses

Mini-courses are special, short-term, interdisciplinary credit courses developed by University faculty (or sometimes by students with the advice and consent of a faculty member) to meet specific, highly current needs or interests not covered in the regular curricula. They are free of charge to all full-time students, even if the course puts them over the full-time limit, and are open to part-time and non-UD students for credit or audit. The typical mini-course carries one semester hour of credit, or fifteen class hours. Classes can be in various sequences, extending over several weeks or concentrated within a few days. Some mini-courses take the form of workshops. Occurring at various times in the year, mini-courses are publicized throughout campus. They can be added to students schedules during the term. For a sample listing of mini-courses, click here (p. 52).

## Special Programs and Continuing Education

To serve adults in the Dayton community, the University provides a variety of noncredit courses, many in the form of workshops, seminars, study tours and conferences. These are planned to meet the educational and training needs of organizations and of the community and are held both on and off campus. This office also administers Elderhostel, OSHER Lifelong Learning Institute, Senior Fellows and New Horizons Music, for persons fifty and over. Continuing Education Units (CEU) are awarded for a charge for some offerings.

## Teacher Licensure for Students in Bachelor of Arts and Bachelor of Science

B.A. or B.S. and B.S.E.

Students earning a Bachelor of Arts or Bachelor of Science Degree in the College of Arts and Sciences who also wish to complete the requirements for a teaching license in the state of Ohio may do this by also completing the requirements for the Bachelor of Science in Education and Health Sciences Degree. The dual degree option requires students to complete

all course and academic requirements, including specific minimum grade point average requirements, in both academic units. Some overlap of degree requirements may exist and students are encouraged to meet with an advisor to obtain a clear understanding of the total academic work needed for the dual degree option. For a full description of the requirements for the teacher licensure programs in the Department of Teacher Education, see <http://catalog.udayton.edu/undergraduate/schoolofeducationandhealthsciences/programsofstudy/teachereducation/>

## Programs of Study

To learn more about the available programs in the College of Arts and Sciences, explore the departments:

- Africana Studies (p. 107)
- Air Force Aerospace Studies ROTC (p. 108)
- American Studies (p. 109)
- Art and Design (p. 112)
- Arts Administration (p. 127)
- Biology (p. 128)
- Chemistry (p. 137)
- Communication (p. 146)
- Computer Science (p. 151)
- Criminal Justice Studies (p. 158)
- Economics (p. 161)
- English (p. 165)
- Family Development (p. 173)
- Film Studies (p. 174)
- General Studies (p. 174)
- Geology (p. 175)
- Global Languages and Cultures (p. 181)
- History (p. 192)
- International Studies (p. 199)
- Marianist Social Transformation (p. 203)
- Mathematics (p. 204)
- Military Science ROTC (p. 212)
- Music (p. 213)
- Philosophy (p. 236)
- Physics (p. 242)
- Political Science (p. 248)
- Prelaw (p. 255)
- Premedicine/ Pre dentistry (p. 256)
- Psychology (p. 261)
- Religious Studies (p. 267)
- Sociology, Anthropology, and Social Work (p. 273)
- Sustainability, Energy, and Environment (p. 280)
- Theatre (p. 281)
- Women's and Gender Studies (p. 284)

## Africana Studies

The Africana studies minor offers an interdisciplinary approach to the study of the peoples of Africa and African descendants in the Americas, Africa and throughout the diaspora. Through its courses, the minor encourages service at the local, national, and international level. The

minor prepares distinctive graduates to develop and use analytical skills and approaches to understand historical and contemporary issues associated with the experience of Africans and African descendants. The minor is interdisciplinary and structured to incorporate teaching and research methodologies and materials from disciplines in the College of Arts and Sciences and other schools throughout the University.

The Africana studies minor requires 15 semester hours. It must include one approved "Special Topics" or "Independent Study" course from an appropriate discipline and 12 semester hours in upper division courses (300-level or above) from a minimum of three different disciplines.

### Africana Studies Committee

Julius A. Amin (History), Coordinator  
Cox (Music), Kebede (Philosophy)

## Minor in Africana Studies (AFS)

### Africana Studies

Select four courses from at least three different disciplines: 12

EDT 340	Educating Diverse Student Populations in Inclusive Settings
ENG 335	African American Literature
HST 336	History of Africa to the Nineteenth Century
HST 337	History of Africa: 19th Century to the Present
HST 383	History of the Caribbean
HST 385	The Atlantic World, 1492-1800
HST 398	African American History before 1877
HST 399	History of Blacks in the United States Since 1900
HST 488	Seminar in African History
MUS 305	African-American Sacred Music
MUS 306	History of American Jazz
MUS 390	Ensembles
PHL 363	African Philosophy
PHL 364	Race, Gender & Philosophy
REL 329	African-American Religion
SOC 328	Racial & Ethnic Relations

Select one special topics course from: 3

MUS 360	Special Topics in Music
REL 492	Special Topics
VAH 490	Special Problems

Special topics or independent studies course approved by committee

Total Hours 15

## Air Force Aerospace Studies, ROTC (AES)

As a University of Dayton student, you have the opportunity to become an Air Force officer through a cooperative agreement with Wright State University's Department of Aerospace Studies. We offer the Air Force Reserve Officer Training Corps (ROTC) program to full-time University of Dayton students pursuing a baccalaureate degree. While all courses are taken through the University of Dayton, leadership laboratories and classes for junior and senior years are typically taught at Wright State University, the host site of the area Air Force ROTC detachment.

The Air Force ROTC program is designed to produce Air Force officers who will be successful leaders and managers. All officers will be placed in positions of responsibility, facing challenging and rewarding career opportunities while using the most advanced technology in the world.

The Air Force ROTC program is organized in two portions: the General Military Course (GMC), typically taken during freshman and sophomore years, and the Professional Officer Course (POC), usually taken during junior and senior years or during the last two years prior to graduation. At a minimum, officers will need to complete the POC portion of the program.

- The GMC is a no-obligation introduction to the Air Force. The course covers the development and history of air power and the organization of the contemporary United States Air Force.
- The POC curriculum covers communicative skills, Air Force management and leadership, American defense policy, and regional world studies. Air Force ROTC students have additional opportunities to participate in challenging and rewarding activities that include piloting a sail-plane, trips to air force bases, orientation flights, official military functions and ceremonies, and one on-one mentoring with an active duty Air Force officer.

This program is open to all majors. All Air Force ROTC students have the opportunity to apply for scholarships that pay partial or full tuition, books, and charges, plus a \$300 - \$500 monthly stipend depending on your progress in the program. These scholarships are available on a competitive basis to students who demonstrate academic and leadership potential. Scholarships with the greatest availability are in the areas of engineering, mathematics, computer science, and physics. High school students should apply for a scholarship no later than December 1st of their senior year. Apply at <http://www.afrotc.com/>. In-college students will apply for scholarships through their Air Force ROTC instructor. If you are a freshman or sophomore seeking a challenge or wish to give Air Force ROTC a trial run, sign up for the Aerospace Studies 121 course.

All other students should contact:

The Department of Aerospace Studies  
Wright State University  
Dayton, Ohio 45435  
Phone: 937-775-2730  
Email: [afrotc@wright.edu](mailto:afrotc@wright.edu)  
Website: <http://www.wright.edu/academics/prog/rotc/>  
or  
The University of Dayton Admissions Office  
Phone: 1-937-229-1000  
E-mail: [info@udayton.edu](mailto:info@udayton.edu)

## Courses

### AES 120. General Military Course (GMC), Leadership Laboratory. 0 Hours

Applied Air Force Reserve Officer Training Corps (AFROTC) training. This lab provides an opportunity for students to apply Air Force procedures, techniques, and knowledge. Students will learn the Air Force organizational structure as well as customs and courtesies. GMC cadets will also develop their followership and teamwork skills in a cadet led, cadre supervised Lab environment. Requires participation in two weekly physical training sessions. Taken concurrently with 100-level AES courses. (Pass/Fail).

**AES 121. Foundations of the United States Air Force I. 1 Hour**

This is a survey course designed to introduce students to the United States Air Force and provide an overview of the basic characteristics, missions, and organization of the Air Force. Corequisite(s): AES 120.

**AES 122. Foundations of the United States Air Force II. 1 Hour**

This is a continuation of AES 121. It is a survey course designed to introduce students to the United States Air Force and provide an overview of the basic characteristics, missions, and organization of the Air Force. Corequisite(s): AES 120.

**AES 220. Field Training Preparation (FTP) Leadership Laboratory. 0 Hours**

Applied Air Force Reserve Officer Training Corps (AFROTC) training. This lab further develops skills and concepts introduced in the General Military Course Leadership Laboratory. Students are prepared mentally and physically for the demanding requirements of upcoming Field Training summer program. Training is cadet led where students will display their ability to apply Air Force concepts and procedures. Requires participation in two weekly physical training sessions. Taken concurrently with 200-level AES courses. (Pass/Fail).

**AES 221. Evolution of USAF Air and Space Power I. 1 Hour**

This course features topics on Air Force heritage and leaders; introduction to air and space power through examination of distinctive capabilities and functions; and continued application of communication skills. Its purpose is to instill an appreciation of the development and employment of air and space power and to motivate sophomore students to transition from AFROTC cadet to Air Force ROTC officer candidate. Corequisite(s): AES 220.

**AES 222. Evolution of USAF Air and Space Power II. 1 Hour**

This course is a continuation of AES 221 and features topics on Air Force heritage and leaders; introduction to air and space power through examination of distinctive capabilities and functions; and continued application of communication skills. Its purpose is to instill an appreciation of the development and employment of air and space power and to motivate sophomore students to transition from AFROTC cadet to Air Force ROTC officer candidate. Corequisite(s): AES 220.

**AES 250. Independent Study. 1-3 Hours**

Independent Study.

**AES 270. Extended GMC Leadership Laboratory. 0 Hours**

Extended GMC Leadership Laboratory.

**AES 322. Air Force Leadership Studies I. 3 Hours**

Air Force Leadership Studies.

**AES 330. Intermediate Cadet Leadership (ICL) Laboratory: Applied Air Force ROTC Training. 0 Hours**

The ICL lab builds the foundation of leadership skills required as an Air Force Officer. Cadets apply leadership/management concepts learned in Field Training and previous aerospace studies classes and labs to assist in training the General Military Course cadets. Requires participation in two weekly physical training sessions. Taken concurrently with 300-level AES courses. (Pass/Fail).

**AES 331. United States Air Force Leadership Studies I. 3 Hours**

This course teaches cadets advanced skills and knowledge in management and leadership. Special emphasis is placed on enhancing leadership skills. Cadets have an opportunity to try out these leadership and management techniques in a supervised environment as juniors and seniors. Prerequisite(s): AES 330.

**AES 332. United States Air Force Leadership Studies II. 3 Hours**

Air Force Leadership Studies.

**AES 430. Senior Cadet Leadership (SCL) Laboratory: Applied Air Force ROTC Training. 0 Hours**

This lab prepares students for progression into active duty life. As in the Intermediate Cadet Leadership Lab, students take leadership roles in execution of leadership labs for the cadet wing. Students hone leadership fundamentals learned in previous courses and labs to a level commensurate to entry into the active duty Air Force. Requires participation in two weekly physical training sessions. Taken concurrently with 400-level AES courses. (Pass/Fail).

**AES 431. National Security Affairs/Preparation for Active Duty I. 3 Hours**

This course is designed to give college seniors the foundation to understand their role as military officers in American society. It is an overview of the complex social and political issues facing the military profession and requires a measure of sophistication commensurate with the senior college level. Corequisite(s): AES 430.

**AES 432. National Security Affairs/Preparation for Active Duty II. 3 Hours**

This course is a continuation of AES 431 and is designed to give college seniors the foundation to understand their role as military officers in American society. It is an overview of the complex social and political issues facing the military profession and requires a measure of sophistication commensurate with the senior college level. Corequisite(s): AES 430.

**AES 440. Senior Cadet Leadership (SCL) Applied Air Force Training. 0 Hours**

Applied Air Force Training.

**AES 470. Extended POC Leadership Laboratory. 0 Hours**

POC Leadership Laboratory.

**AES 491. Independent Study. 1 Hour**

Independent Study.

**AES 493. Independent Study. 3 Hours**

Independent Study.

## American Studies

- Bachelor of Arts, American Studies (p. 109)

In this interdisciplinary program, students take courses in their choice of 11 fields, thereby learning the skills of integrating, coordinating and making connections. The program, one of over 300 nationwide, is most appropriate for those whose interests encompass several traditional majors.

**American Studies Committee**

Donald L. Pair (Office of the Dean), Interim Program Director

## Bachelor of Arts with a Major in American Studies (AMS) Minimum 124 Hours

**Common Academic Program (CAP)**

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>		12
HST 103	West and the World	
REL 103	Introduction to Religious and Theological Studies	
PHL 103	Intro To Philosophy	
ENG 100	Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>		0-3



ENG 200	Writing Seminar II	
Oral Communication		3
CMM 100	Principles of Oral Communication	
Mathematics		3
Social Science		3
Arts		3
Natural Sciences <sup>4</sup>		7
Crossing Boundaries		variable credit
Faith Traditions		
Practical Ethical Action		
Inquiry		
Integrative		
Advanced Study		variable credit
Philosophy and/or Religious Studies		
Historical Studies		
Diversity and Social Justice		3
Major Capstone		0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

#### Liberal Studies Curriculum

Creative and Performing Arts (May include CAP Arts)	3
L2 Proficiency (Proficiency in a language other than English)	0-11
Literature (May include CAP Components)	3
Mathematics, excluding MTH 205 (Satisfies CAP Mathematics)	3
Natural Sciences (Satisfies CAP Natural Science)	11
Social Sciences (Includes CAP Social Science)	12

#### Major Requirements 48

AMS 300	American Cultures (Satisfies CAP Inquiry)	3
AMS 301	Interpretations of American Culture	3
AMS 400	Interdisciplinary Research (Satisfies CAP Major Capstone)	3

#### First Area Courses:

Select five courses from either group A, B, or C	15
Select three supporting courses from the elected discipline	9

#### Second Area Courses:

Select three courses from one of the two remaining groups	9
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#### Third Area Courses:

Select two courses from the remaining group	6
---	---

#### Groups:

##### Group A

(May include CAP Arts)

ENG 305	Survey of American Literature	
ENG 317	Contemporary Poetry <sup>1</sup>	
ENG 319	Contemporary Fiction <sup>1</sup>	
ENG 320	Contemporary Drama <sup>1</sup>	

ENG 325	Science Fiction	
ENG 327	Studies in Popular Fiction	
ENG 329	Short Story <sup>1</sup>	
ENG 331	Studies in Film <sup>1</sup>	
ENG 332	Studies in Literature & Film <sup>1</sup>	
ENG 335	African American Literature	
ENG 337	Studies in Folklore	
ENG 339	American Indian Literature	
ENG 380	Studies in Literature <sup>1</sup>	
ENG 383	Tragic Dilemma <sup>1</sup>	
ENG 451	American Romanticism	
ENG 453	American Realism & Naturalism	
ENG 455	20th Century American Literature	
ENG 468	Introduction to Linguistics	
ENG 490	Research Seminar-Literature <sup>1</sup>	
MUS 304	History of American Music	
MUS 305	African-American Sacred Music	
MUS 306	History of American Jazz	
MUS 307	Development of American Popular Song	
MUS 327	Music in Film	
MUS 328	History of the American Musical	
MUS 404	Twentieth-Century Music <sup>1</sup>	
VAH 370	Nineteenth Century Art I	
VAH 480	Modernisms in Art	
VAH 482	History of Photography II	
VAH 483	PostColonial and Global Art Histories	
VAH 490	Special Problems <sup>1</sup>	

#### Group B

(May include CAP Advanced Study in History, Philosophy and Religious Studies)

HST 342	Environmental History of the Americas	
HST 344	History of Science, Technology & the Modern Corporation	
HST 346	History of American Aviation	
HST 347	Sex, Race & Science	
HST 351	American Gender & Women's History	
HST 352	History of the American Family	
HST 355	American Urban History	
HST 360	U.S. Legal & Constitutional History I	
HST 361	U.S. Legal & Constitutional History II	
HST 365	American Films as History	
HST 369	Civil War & Reconstruction	
HST 370	Economic & Business History of the United States	
HST 372	History of Religion in America	
HST 373	American Military History	
HST 374	Ireland & America	
HST 375	History of US Foreign Relations	
HST 376	Social & Cultural History of the United States	
HST 377	Contemporary American History	
HST 378	Global Immigration	
HST 380	Native American History	

HST 385	The Atlantic World, 1492-1800
HST 391	American Architectural History & Preservation
HST 398	African American History before 1877
HST 399	History of Blacks in the United States Since 1900
HST 490	Seminar in Histrography
HST 495	Internship
HST 499	Topics in History <sup>1</sup>
PHL 307	Philosophy & Women
PHL 310	Social Philosophy
PHL 311	Philosophy of Religion
PHL 314	Philosophy of Law
PHL 317	Ethics & Modern War
PHL 318	Family Ethics
PHL 320	Philosophy of Art
PHL 323	Philosophy & Literature
PHL 331	Science, Objectivity & Values
PHL 332	Technology & Values
PHL 340	Special Problems in Philosophy <sup>1</sup>
PHL 361	American Philosophy
REL 326	Protestant Christianity
REL 327	United States Religious Experience
REL 328	United States Catholic Experience
REL 364	Current Moral Issues
REL 367	Christian Ethics & Health Care Issues
REL 372	Religion & Film
REL 373	Religion & Literature
REL 375	Religion & Science, Religion and Science
REL 376	Theology & the Social Sciences
REL 485	Lay Ministry

**Group C**

(May include CAP Components)

ANT 315	Language & Culture
ANT 335	Urban Anthropology
ANT 449	Anthropological Field Work
ECO 346	Intermediate Microeconomic Analysis
ECO 347	Intermediate Macroeconomic Analysis
ECO 390	Antitrust Economics
ECO 435	Economics of the Environment
ECO 441	Econometrics
ECO 442	Money & Banking
ECO 445	Public Finance
ECO 460	Economic Development & Growth
ECO 461	International Economics
ECO 471	Labor Economics
ECO 485	Urban & Regional Economics
POL 301	The American Judicial Process
POL 303	State & Local Government
POL 310	Political Parties, Campaigns & Elections
POL 311	Public Opinion & Political Behavior
POL 313	The American Presidency
POL 314	Interest Group Politics
POL 316	American Political Thought

POL 335	United States National Security Policy
POL 350	Legislative Politics
POL 360	Urban Politics & Policy
POL 408	American Foreign Policy
POL 411	Constitutional Law
POL 413	The Politics of Bureaucracy & Regulation
POL 450	Civil Liberties
PSY 334	Industrial Psychology
PSY 341	Social Psychology
PSY 351	Child Psychology
PSY 361	Personality
PSY 363	Abnormal Psychology
PSY 443	Psychology of Women
PSY 461	Current Implications of Drug Dependency
PSY 462	Human Sexuality
PSY 471	History of Psychology
SOC 321	The Sociology of Work & Occupations
SOC 328	Racial & Ethnic Relations
SOC 337	Political Sociology
SOC 339	Social Inequality
SOC 341	Self & Society
SOC 343	Mass Communication in Modern Society
SOC 351	Urban Sociology
SOC 352	Community
SOC 435	Economy & Society

<sup>1</sup> This course can be counted only when the material is appropriate to American Studies. Consult the program director.

**Breadth**

ASI 150	Introduction to the University Experience	1
Total Hours to total at least		124

**First Year**

Fall	Hours Spring	Hours
ASI 150	1 ENG 100	3
REL 103	3 Language 141	4
Language 101	4 SCI 190	3
PSY 101	3 SCI 190L	1
MTH 114	3 HST 103	3
CMM 100	3 PHL 103	3
	<b>17</b>	<b>17</b>

**Second Year**

Fall	Hours Spring	Hours
AMS 300	3 ENG 200	3
SCI 210 or 220	3 PSY 300 or 400 level	3
SCI 210L or 220L	1 SCI 230 or 240	3
Language contextual course	3 AMS 301	3
Arts	3 Literature	3
Social Science Intro	3	
	<b>16</b>	<b>15</b>

**Third Year**

Fall	Hours Spring	Hours
Option 1 - A1	3 Option 1 - A4	3
Option 1 - A2	3 Option 1 -A5	3
Adv PHL or REL	3 Inquiry	3
Social Science	3 Adv PHL or REL	3
Option 1 - A3	3 Adv HST	3
	<b>15</b>	<b>15</b>

**Fourth Year**

Fall	Hours Spring	Hours
Option 1 - B1	3 AMS 400	3
Option 1 -B2	3 Practical Ethical Action	3
Option 1 - C1	4 Diversity and Social Justice	3
Integrative	3 Option 1 - B3	3
Faith Tradition	3 Option 1 -C2	3
	<b>16</b>	<b>15</b>

Total credit hours: 126

**Courses****AMS 300. American Cultures. 3 Hours**

Study of American artifacts to discern how they indicate the periods in the life of the civilization and how like artifacts can be used to determine the stages of development of various peoples. (Will not satisfy humanities breadth requirement.).

**AMS 301. Interpretations of American Culture. 3 Hours**

Critical study of various interpretations of American culture through more than a hundred years.

**AMS 400. Interdisciplinary Research. 3 Hours**

Study of the principles of interdisciplinary scholarship; what can and probably cannot be accomplished by it; successful interdisciplinary accomplishments. Students will complete interdisciplinary projects.

**AMS 477H. Honors Thesis. 3 Hours**

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for 3 semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

**AMS 478H. Honors Thesis. 3 Hours**

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for 3 semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

**Art and Design**

Majors:

- Bachelor of Arts, Art History (p. 113)
- Bachelor of Arts, Visual Arts (p. 114)

- Bachelor of Fine Arts, Art Education (p. 115)
- Bachelor of Fine Arts, Fine Arts (p. 116)
- Bachelor of Fine Arts, Graphic Design (p. 116)
- Bachelor of Fine Arts, Photography (p. 117)

Minors:

- Art History (p. 118)
- Fine Arts (p. 118)
- Graphic Design (p. 118)
- Photography (p. 118)
- Visual Arts (p. 118)

The Department of Art and Design provides quality education in the areas of art education, art history, fine art studio, photography, visual arts, and graphic design. The Department cultivates high standards for creativity, craft, conceptual understanding, critical analysis, historical scholarship, and pedagogy. Central to these pursuits are the artistic practice and scholarly research of faculty, the dedication of support staff to the department's educational objectives, and engaged teaching, learning, and scholarship. The Department of Art and Design is a thriving learning community grounded in the Marianist tradition of educating the whole person. It is fully integrated with the College and the University and contributes significantly to our institutional commitment to excellence.

The department offers the following degrees:

**Bachelor of Arts Degree (B.A.)**

The Bachelor of Arts (B.A.) is intended for those interested in a broad liberal arts education as an overarching part of their chosen major (Art History, Visual Arts). Approximately 40 percent of the degree requirements are taken in the creation and study of visual arts particular to the chosen major. With this degree option it is possible for students to earn a minor, or even a second major, in another university offered discipline. The B.A. degree combines the major specific curriculum with visual arts foundation courses, and the College of Arts and Sciences and University general education requirements referred to as the Common Academic Program (CAP).

**Bachelor of Fine Arts Degree (B.F.A.)**

The Bachelor of Fine Arts Degree (B.F.A.) is an intensive "professional" program of study specifically tailored to prepare students to enter the field of their chosen major (Art Education, Fine Arts, Photography, Graphic Design) or to continue their studies in graduate school. Approximately 65 percent of the degree requirements are in the creation and study of the visual arts particular to the chosen major. The B.F.A. degree combines the major specific curriculum with visual arts foundation courses, and the College of Arts and Sciences and University general education requirements referred to as the Common Academic Program (CAP).

**Majors include:****Bachelor of Arts (B.A.) with a Major in:**

- Art History
- Visual Arts

**Bachelor of Fine Arts (B.F.A.) with Teacher Licensure:**

- Art Education

**Bachelor of Fine Arts (B.F.A.) with a Major in:**

- Fine Arts
- Graphic Design

- Photography

## Program Descriptions:

### Art History (HOA)

Art history is the study of art and architecture produced within specific cultural contexts as a manifestation of human creativity and as a valuable form of historical documentation. Students learn to appreciate the fundamental and varied roles that the visual arts have played and continue to play in the lives of people around the globe. Toward this end, students learn how images and objects, identified as art, embody, but also condition and control social, religious, cultural, economic, political, and gender dynamics.

### Visual Arts (VAR)

The Bachelor of Arts (B.A.) with a major in Visual Arts is a flexible program that emphasizes a broad liberal arts education with supportive studies in art, design, and art history. This degree offers students a breadth of exploration of all areas making up the Department of Visual Arts. Studio and art history requirements constitute 35 to 40 percent of the Visual Arts B.A. degree. To take advantage of the diverse academic environment that is the University of Dayton, students are encouraged to earn a minor or a second major within another discipline. Students may not obtain a dual-degree in Visual Arts and the following: Fine Arts (ART), Graphic Design (GDN), or Photography (PHO). It is permitted to double major in Visual Arts and Art History. In this case, the maximum of 12 semester hours of VAH courses allowed in the Visual Arts major may double count.

### Art Education (FAE)

The Bachelor of Fine Arts with Teacher Licensure, a B.F.A. (E11A) program, offers students expertise in studio practice, art history, aesthetics, and critical analysis of art. Field experience in the Dayton area allows students to transform theoretical knowledge into classroom practice. Graduates are well prepared for teaching positions in public or private schools, pre-kindergarten through grade 12, as well as for master's degree programs.

### Fine Arts (ART)

The Bachelor of Fine Arts (B.F.A.) with a major in Fine Arts is a professional degree program that provides an intensive, in depth exploration of selected fine art media. Students choose an emphasis in ceramics, drawing, illustration, painting, printmaking, or sculpture.

### Graphic Design (GDN)

The Bachelor of Fine Arts (B.F.A.) with a major in Graphic Design is an intensive professional degree program designed to prepare students for careers in graphic and advertising design, electronic media and related new technologies.

### Photography (PHO)

The Bachelor of Fine Arts (B.F.A.) with a major in Photography is a professional degree that provides an intensive, in depth exploration of photographic media.

### Art and Design Minors

- A Minor in Art History consists of 18 semester hours. (For majors in visual arts, only six semester hours of the minor may double count.)
- A Minor in Fine Arts consists of 21 semester hours. (Not open to majors in visual arts.)

- A Minor in Photography consists of 21 semester hours. (Not open to majors in visual arts.)
- A Minor in Visual Arts consists of 20 semester hours. (Not open to majors in art education, fine arts, photography, or visual communication design.)
- A Minor in Graphic Design consists of 21 semester hours. (Not open to majors in visual arts.)
- Transfer students seeking a visual arts minor must complete at least nine of the required semester hours in the visual arts department while in residency at the University of Dayton.

## Art and Design Foundations

Visual arts foundation courses introduce students to fundamental principles, practices, materials, and vocabulary common to all visual arts disciplines. These courses provide a common background of skill development along with an understanding of primary concepts in the visual arts and a basis for critical evaluation. All foundation courses share the objective of preparing students to face the challenges of their specific disciplines.

## Foundations Scholarship Review

During their second year, all Art and Design majors are reviewed by the Art and Design faculty. Participation in the Foundations Scholarship Review is mandatory for all Visual Arts majors. Students must receive a satisfactory review rating before graduating with a visual arts degree. Also included in the review are first and third year students who have been awarded Art and Design Scholarships. The review process is a valuable learning experience for the student and it helps the faculty to recommend ways in which students may build upon their assets and overcome their liabilities. Monetary awards applied toward future tuition are available to a limited number of students whose performance in the review is judged by the faculty to be outstanding.

## Senior Capstone Courses

These courses, required in all majors, bring together the skills, education, ideas, and goals of senior students. They stress an integrated approach to learning and working and they focus on preparing students for their futures beyond the University. They provide a logical continuity that begins with the Art and Design Foundations courses, the Foundations Scholarship Review and work within the major.

## Faculty

Judith Huacuja, Chairperson  
 Professor Emeritus: Niles  
 Professors: Crum, Whitaker  
 Associate Professors: Clarke, Holscher Almazan, Huacuja, Jones, Kwon, Marcinowski, Matlack-Whitaker, Phelps, Wilbers  
 Assistant Professors: Bradshaw, Jennings, Smith  
 Lecturers: Kargl, Tsen

## Bachelor of Arts with a major in Art History (hoa) Minimum 124 Hours

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>		12
HST 103	West and the World	
REL 103	Introduction to Religious and Theological Studies	



PHL 103	Intro To Philosophy	
ENG 100	Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>		0-3
ENG 200	Writing Seminar II	
Oral Communication		3
CMM 100	Principles of Oral Communication	
Mathematics		3
Social Science		3
Arts		3
Natural Sciences <sup>4</sup>		7
Crossing Boundaries		variable credit
Faith Traditions		
Practical Ethical Action		
Inquiry		
Integrative		
Advanced Study		variable credit
Philosophy and/or Religious Studies		
Historical Studies		
Diversity and Social Justice		3
Major Capstone		0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

#### Liberal Studies Curriculum

L2 Proficiency (Proficiency in a language other than English)	0-11
Literature (May include CAP Components)	3
Mathematics, excluding MTH 205 (Satisfies CAP Mathematics)	3
Natural Sciences (Satisfies CAP Natural Science)	11
Social Sciences (Includes CAP Social Science)	12

#### Major Requirements

VAH 129	Foundations in Art History (Satisfies CAP Arts)	3
VAH 201	Survey of Art I	3
VAH 202	Survey of Art II	3
VAH 203	Survey of Art III	3
VAH 483	PostColonial and Global Art Histories	3
VAH 485	Art History Seminar (Satisfies CAP Major Capstone)	3
VAF 104	Foundation Drawing	3
VAR 299	Second Year Review	0
Select one from:		3
VAF 112	Foundation 2-D Design	
VAF 117	Foundation 3-D Design	
VAP 101	Foundation Photography	
Select six VAH courses (300/400 level)		18
Select one major program elective <sup>1</sup>		3

#### Breadth

VAR 100	Visual Arts Foundation	1
Total Hours to total at least		124

<sup>1</sup> Major program courses may be chosen, in consultation with an art history advisor, from among the following disciplines and courses: ANT 300, CMM 313, ENG 322, PHL 320, PSY 375 and REL 374. Alternatives to these courses may be elected with the approval of an art history advisor. Major program electives must be at the 300-400 level (except in the case of Fine Arts courses), and they may not be used to satisfy the liberal studies requirements

## Bachelor of Arts with a major in Visual Arts (var) Minimum 124 Hours

#### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>		12
HST 103	West and the World	
REL 103	Introduction to Religious and Theological Studies	
PHL 103	Intro To Philosophy	
ENG 100	Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>		0-3
ENG 200	Writing Seminar II	
Oral Communication		3
CMM 100	Principles of Oral Communication	
Mathematics		3
Social Science		3
Arts		3
Natural Sciences <sup>4</sup>		7
Crossing Boundaries		variable credit
Faith Traditions		
Practical Ethical Action		
Inquiry		
Integrative		
Advanced Study		variable credit
Philosophy and/or Religious Studies		
Historical Studies		
Diversity and Social Justice		3
Major Capstone		0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

#### Liberal Studies Curriculum

L2 Proficiency (Proficiency in a language other than English)	0-11
Literature (May include CAP Components)	3
Mathematics, excluding MTH 205 (Satisfies CAP Mathematics)	3

Natural Sciences (Satisfies CAP Natural Science)	11
Social Sciences (Includes CAP Social Science)	12

<b>Major Requirements</b>	<b>45</b>
VAD 220 Design Processes I	3
VAF 104 Foundation Drawing	3
VAF 112 Foundation 2-D Design	3
VAF 117 Foundation 3-D Design	3
VAF 216 Design & Color	3
VAP 101 Foundation Photography	3
VAP 201 Photography II	3
or VAP 240 Digital Processes I	
VAR 299 Second Year Review	0
VAR 495 Senior Project Seminar (With VAR 496, Satisfies CAP Major Capstone)	1
VAR 496 Project, Presentation & Paper	3
Select one course from: (Satisfies CAP Arts)	3
VAH 201 Survey of Art I	
VAH 202 Survey of Art II	
VAH 203 Survey of Art III	
Select one VAH course (300/400 level)	3
Select five Visual arts courses <sup>1</sup>	14

**Breadth**

VAR 100 Visual Arts Foundation	1
Total Hours to total at least	124

<sup>1</sup> Nine of the fourteen hours to be selected from at least two of the following: VAD, VAF, VAP, and VAR. Nine of the fourteen hours must be at the 300-400 level.

## Bachelor of Fine Arts with a major in Art Education (fae) Minimum 134 Hours

**Common Academic Program (CAP)**

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
HST 103 West and the World	
REL 103 Introduction to Religious and Theological Studies	
PHL 103 Intro To Philosophy	
ENG 100 Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>	0-3
ENG 200 Writing Seminar II	
Oral Communication	3
CMM 100 Principles of Oral Communication	
Mathematics	3
Social Science	3
Arts	3
Natural Sciences <sup>4</sup>	7
Crossing Boundaries	variable credit
Faith Traditions	
Practical Ethical Action	
Inquiry	

<b>Integrative</b>	
Advanced Study	variable credit

Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

**BFA Requirements**

Mathematics, excluding MTH 205 (Satisfies CAP Mathematics)	3
Natural Sciences (Satisfies CAP Natural Science)	7
Social Sciences (Includes CAP Social Science)	3

### Major Requirements <sup>1, 2</sup> 69

VAE 231 Introduction to Art Education	2
VAE 383 Foundation of Art Education	3
VAE 483 Teaching Visual Arts	3
VAF 104 Foundation Drawing	3
VAF 112 Foundation 2-D Design	3
VAF 117 Foundation 3-D Design	3
VAF 204 Drawing II	3
VAF 216 Design & Color	3
VAF 226 Painting I	3
VAF 232 Sculpture I	3
VAF 240 Ceramics I	3
or VAF 242 Ceramics II	
VAF 253 Printmaking I	3
or VAF 353 Printmaking II	
VAF 304 Drawing III	3
VAF 498 Senior/Professional Seminar- Fine Arts (With VAF 499, satisfies CAP Major Capstone)	3
VAF 499 Portfolio & Paper- Fine Arts	1
VAP 101 Foundation Photography	3
VAR 299 Second Year Review	0
Select two courses from: (Satisfies CAP Arts)	6
VAH 201 Survey of Art I	
VAH 202 Survey of Art II	
VAH 203 Survey of Art III	
Select one course from:	3
VAH 470 Nineteenth Century Art I	
VAH 471 Nineteenth Century Art II	
VAH 480 Modernisms in Art	
VAH 483 PostColonial and Global Art Histories	
Select one VAH course	3
Select four VAR courses	12
<b>Education requirements:</b>	<b>27</b>

EDT 110 & 110L	The Profession of Teaching and The Profession of Teaching Laboratory	3
EDT 207 & 207L	Child & Adolescent in Education and Child & Adolescent in Education Laboratory	3
EDT 305	Philosophy & History of American Education (Satisfies CAP Practical Ethical Action, and Advanced Study in Philosophy)	3
EDT 340	Educating Diverse Student Populations in Inclusive Settings (Satisfies CAP Integrative, and Diversity and Social Justice)	3
EDT 340L	Educating Diverse Student Populations in Inclusive Settings Laboratory	0
EDT 459	Critical Reading & Writing in the Content Area	3
EDT 477	Student Teaching- Art P-12	12

**Breadth**

VAR 100	Visual Arts Foundation	1
Total Hours to total at least		134

- Students in the Art Education program are required to maintain a 2.5 cumulative grade point average overall, and a 2.5 cumulative grade point average in teacher education and visual arts courses.
- Students are required to pass PRAXIS I and II and a Second Year Review in their studio work.

## Bachelor of Fine Arts with a major in Fine Arts (art) Minimum 132 Hours

**Common Academic Program (CAP)**

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>		12
HST 103	West and the World	
REL 103	Introduction to Religious and Theological Studies	
PHL 103	Intro To Philosophy	
ENG 100	Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>		0-3
ENG 200	Writing Seminar II	
Oral Communication		3
CMM 100	Principles of Oral Communication	
Mathematics		3
Social Science		3
Arts		3
Natural Sciences <sup>4</sup>		7
Crossing Boundaries		variable credit
Faith Traditions		
Practical Ethical Action		
Inquiry		
Integrative		
Advanced Study		variable credit
Philosophy and/or Religious Studies		
Historical Studies		

Diversity and Social Justice	3
Major Capstone	0-3

- Completed with ASI 110 and ASI 120.
- Or ENG 100A and ENG 100B, or ENG 200H, by placement.
- Completed with ENG 200H or ASI 120.
- Must include two different disciplines and accompanying lab.

**BFA Requirements**

Humanities (Includes CAP Components)	12
Mathematics, excluding MTH 205 (Satisfies CAP Mathematics)	3
Natural Sciences (Satisfies CAP Natural Science)	7
Social Sciences (Includes CAP Social Science)	9

**Major Requirements**

		79
VAF 104	Foundation Drawing	3
VAF 112	Foundation 2-D Design	3
VAF 117	Foundation 3-D Design	3
VAF 204	Drawing II	3
VAF 216	Design & Color	3
VAF 226	Painting I	3
VAF 232	Sculpture I	3
VAF 253	Printmaking I	3
VAF 304	Drawing III	3
VAF 326	Painting II	3
VAF 332	Sculpture II	3
VAF 353	Printmaking II	3
VAF 498	Senior/Professional Seminar- Fine Arts (With VAF 499, satisfies CAP Major Capstone)	3
VAF 499	Portfolio & Paper- Fine Arts	1
VAP 101	Foundation Photography	3
VAR 299	Second Year Review	0
VAF emphasis		12
Select two courses from: (Satisfies CAP Arts)		6
VAH 201	Survey of Art I	
VAH 202	Survey of Art II	
VAH 203	Survey of Art III	
Select two VAH courses (300/400 level) (May include CAP Components)		6
Select Visual arts courses		12

**Breadth**

VAR 100	Visual Arts Foundation	1
Total Hours to total at least		132

## Bachelor of Fine Arts with a major in GRAPHIC Design (GDN) Minimum 129 Hours

**Common Academic Program (CAP)**

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
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HST 103	West and the World	
REL 103	Introduction to Religious and Theological Studies	
PHL 103	Intro To Philosophy	
ENG 100	Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>		0-3
ENG 200	Writing Seminar II	
Oral Communication		3
CMM 100	Principles of Oral Communication	
Mathematics		3
Social Science		3
Arts		3
Natural Sciences <sup>4</sup>		7
Crossing Boundaries		variable credit
Faith Traditions		
Practical Ethical Action		
Inquiry		
Integrative		
Advanced Study		variable credit
Philosophy and/or Religious Studies		
Historical Studies		
Diversity and Social Justice		3
Major Capstone		0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

### BFA Requirements

Humanities (Includes CAP Components)	9
Mathematics, excluding MTH 205 (Satisfies CAP Mathematics)	3
Natural Sciences (Satisfies CAP Natural Science)	7
Social Sciences (Includes CAP Social Science)	3

### Major Requirements 85

VAD 220	Design Processes I	3
VAD 240	Form & Concept	3
VAD 245	Typography I	3
VAD 320	Design Processes II	3
VAD 345	Typography II	3
VAD 360	Web Design	3
VAD 411	Graphic Design I	3
VAD 412	Graphic Design II	3
VAD 415	Graphic Design III	3
VAD 498	Senior/Professional Seminar - Graphic Design (With VAD 499, satisfies CAP Major Capstone)	3
VAD 499	Portfolio and Paper - Graphic Design	1
VAF 104	Foundation Drawing	3
VAF 112	Foundation 2-D Design	3
VAF 117	Foundation 3-D Design	3

VAF 204	Drawing II	3
VAF 216	Design & Color	3
VAH 383	History of Graphic Design	3
VAP 101	Foundation Photography	3
VAR 299	Second Year Review	0
Select two courses from: (Satisfies CAP Arts)		6
VAH 201	Survey of Art I	
VAH 202	Survey of Art II	
VAH 203	Survey of Art III	
Select one fine arts course from:		3
VAF 226	Painting I	
VAF 253	Printmaking I	
VAF 240	Ceramics I	
VAF 242	Ceramics II	
VAF 232	Sculpture I	
VAF 370	Illustration I	
Select one VAH course (300/400 level) (May include CAP Advanced Historical Studies)		3
Select one VAP course		3
Select Visual Arts courses (May include CAP Components)		12
Select two marketing or communication courses		6

### Breadth

VAR 100	Visual Arts Foundation	1
Total Hours to total at least		129

## Bachelor of Fine Arts with a major in Photography (pho) Minimum 131 Hours

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
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HST 103	West and the World	
REL 103	Introduction to Religious and Theological Studies	
PHL 103	Intro To Philosophy	
ENG 100	Writing Seminar I <sup>2</sup>	

Second-Year Writing Seminar <sup>3</sup>	0-3
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ENG 200	Writing Seminar II	
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Oral Communication	3
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CMM 100	Principles of Oral Communication	
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Mathematics	3
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Social Science	3
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Arts	3
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Natural Sciences <sup>4</sup>	7
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Crossing Boundaries	variable credit
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Faith Traditions	
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Practical Ethical Action	
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Inquiry	
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Integrative	
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Advanced Study	variable credit
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Philosophy and/or Religious Studies	
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Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

- <sup>1</sup> Completed with ASI 110 and ASI 120.
- <sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.
- <sup>3</sup> Completed with ENG 200H or ASI 120.
- <sup>4</sup> Must include two different disciplines and accompanying lab.

**BFA Requirements**

Humanities (Includes CAP Components)	18
Mathematics, excluding MTH 205 (Satisfies CAP Mathematics)	3
Natural Sciences (Satisfies CAP Natural Science)	7
Social Sciences (Includes CAP Social Science)	9

**Major Requirements** 72

VAF 104	Foundation Drawing	3
VAF 112	Foundation 2-D Design	3
VAF 117	Foundation 3-D Design	3
VAF 204	Drawing II	3
VAF 216	Design & Color	3
VAH 382	History of Photography I (Satisfies CAP Advanced Historical Studies)	3
VAH 480	Modernisms in Art	3
VAH 482	History of Photography II	3
VAP 101	Foundation Photography (Satisfies CAP Arts)	3
VAP 201	Photography II	3
VAP 240	Digital Processes I	3
VAP 302	Color Photography I	3
VAP 410	Advanced Photography	3
VAP 498	Senior/Professional Seminar- Photography (With VAP 499, satisfies CAP Major Capstone)	3
VAP 499	Portfolio and Paper	1
VAR 299	Second Year Review	0

## Select two courses from: 6

VAP 320	Studio Practice I	
VAP 330	Alternative Photography I	
VAP 340	Digital Processes II	

## Select two courses from: 6

VAH 201	Survey of Art I	
VAH 202	Survey of Art II	
VAH 203	Survey of Art III	

## Select three VAP courses (300/400 level) 9

## Select Visual Arts courses (May include CAP Components) 8

**Breadth**

VAR 100	Visual Arts Foundation	1
Total Hours to total at least		131

**Minor in Art History (hoa)****Art History**

Select two courses from:	6
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VAH 201	Survey of Art I	
VAH 202	Survey of Art II	
VAH 203	Survey of Art III	
Select four VAH courses (300/400 level)		12
Total Hours		18

**Minor in Fine Arts (art)****Fine Arts**

VAF 104	Foundation Drawing	3
VAF 112	Foundation 2-D Design	3
VAH 201	Survey of Art I	3
or VAH 202	Survey of Art II	
or VAH 203	Survey of Art III	
Select four VAF courses		12
Total Hours		21

**Minor in GRAPHIC Design (GDN)****Graphic Design**

VAD 220	Design Processes I	3
VAD 240	Form & Concept	3
VAD 245	Typography I	3
VAD 320	Design Processes II	3
VAF 112	Foundation 2-D Design	3
VAF 216	Design & Color	3
VAH 383	History of Graphic Design	3
Select one course from:		3
VAD 318	Graphic Design for Three Dimensions	
VAD 345	Typography II	
VAD 360	Web Design	
VAD 395	Advertising Design	
VAD 411	Graphic Design I	
Total Hours		24

**Minor in Photography (pho)****Photography**

VAH 382	History of Photography I	3
VAP 101	Foundation Photography	3
VAP 201	Photography II	3
VAP 240	Digital Processes I	3
Select three VAP courses (300/400 level)		9
Total Hours		21

**Minor in Visual Arts (var)****Visual Arts**

VAD 220	Design Processes I	3
VAF 104	Foundation Drawing	3
VAF 112	Foundation 2-D Design	3
VAH 201	Survey of Art I	3
or VAH 202	Survey of Art II	
or VAH 203	Survey of Art III	
VAP 101	Foundation Photography	3

Select two VAD, VAF, VAP and/or VAR courses	6
Total Hours	21

- Bachelor of Arts, Art History (p. 119)
- Bachelor of Arts, Visual Arts (p. 119)
- Bachelor of Fine Arts, Art Education (p. 119)
- Bachelor of Fine Arts, Fine Arts (p. 120)
- Bachelor of Fine Arts, Graphic Design (p. 120)
- Bachelor of Fine Arts, Photography (p. 121)

## Bachelor of Arts, Art History

### First Year

Fall	Hours Spring	Hours
VAR 100	1 ASI 120	8
ASI 110	7 VAH 201	3
VAH 129	3 VAF 112, 117, or VAP 101	3
VAF 104	3 CMM 100	3
CMM 100	3 or Social Science	
or Social Science		
	<b>17</b>	<b>17</b>

### Second Year

Fall	Hours Spring	Hours
VAH 202	3 VAH 203	3
VAH 300/400 level	3 VAH 300/400 level	3
SSC 200 (satisfies CAP Social Science)	3 Social Science	3
INSS (CAP Natural Science)	4 Language	4
Language	4 INSS (CAP Natural Science)	4
	<b>17</b>	<b>17</b>

### Third Year

Fall	Hours Spring	Hours
VAH 483	3 VAH 300/400	3
VAH 300/400 level	3 Major Program elective	3
VAR 299	0 MTH (CAP Mathematics)	3
Literature	3 Social Science	3
Language	3 CAP Integrative	3
INSS (CAP Inquiry)	3	
	<b>15</b>	<b>15</b>

### Fourth Year

Fall	Hours Spring	Hours
VAH 300/400 level	3 VAH 485	3
VAH 300/400 level	3 Diversity and Social Justice	3
Advanced Historical Study	3 Adv PHL/REL (Practical Ethical Action / Faith Traditions)	3
Adv PHL/REL (Practical Ethical Action / Faith Traditions)	3 General Elective	3
	General Elective	2
	<b>12</b>	<b>14</b>

Total credit hours: 124

## Bachelor of Arts, Visual Arts

### First Year

Fall	Hours Spring	Hours
VAR 100	1 ENG 100 (CAP Writing Seminar)	3
VAF 104	3 HST 103, PHL 103, or REL 103 (CAP Humanities)	3
VAF 112	3 VAF 117	3
HST 103, PHL 103, or REL 103 (CAP Humanities)	3 VAF 216	3
HST 103, PHL 103, or REL 103 (CAP Humanities)	3 VAP 101	3
CMM 100 (CAP Communication)	3	
	<b>16</b>	<b>15</b>

### Second Year

Fall	Hours Spring	Hours
ENG 200	3 VAH 201, 202, or 203 (CAP Arts)	3
VAD 220	3 VAP 201 or 240	3
VAR 299	0 Literature or general elective	3
Visual Arts elective	3 SSC 200 (CAP Social Science)	3
Literature or general elective	3 Language	4
Language	4	
	<b>16</b>	<b>16</b>

### Third Year

Fall	Hours Spring	Hours
VAH 300/400 level	3 Visual Arts elective	3
Visual Arts elective	3 MTH (CAP Mathematics)	3
Language	3 INSS (CAP Natural Science)	4
Social Science	3 Adv HST (CAP Integrative)	3
INSS (CAP Natural Science)	4 Social Science	3
	<b>16</b>	<b>16</b>

### Fourth Year

Fall	Hours Spring	Hours
VAR 495	1 VAR 496	3
Visual Arts elective	3 Visual Arts elective	2
Adv PHL/REL (Practical Ethical Action / Faith Traditions)	3 Adv PHL/REL (Practical Ethical Action / Faith Traditions)	3
Social Science	3 Diversity and Social Justice	3
INSS (CAP Inquiry)	3 General elective	3
General elective	2	
	<b>15</b>	<b>14</b>

Total credit hours: 124

## Bachelor of Fine Arts, Art Education

### First Year

Fall	Hours Spring	Hours
VAR 100	1 EDT 110	2
VAF 104	3 EDT 110L	1
VAF 112	3 VAF 117	3

VAP 101	3 VAF 216	3	HST 103, PHL 103, or REL	3 HST 103, PHL 103, or REL	3
HST 103, PHL 103, or REL	3 CMM 100 (CAP	3	103 (CAP Humanities)	103 (CAP Humanities)	
103 (CAP Humanities)	Communication )		HST 103, PHL 103, or REL	3	
HST 103, PHL 103, or REL	3 ENG 100 (CAP Writing	3	103 (CAP Humanities)		
103 (CAP Humanities)	Seminar)			<b>16</b>	<b>15</b>
	HST 103, PHL 103, or REL	3	<b>Second Year</b>		
	103 (CAP Humanities)		<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
<b>16</b>	<b>18</b>		VAH 201, 202, or 203 (CAP	3 VAF 226 or 232	3
<b>Second Year</b>			Arts)		
<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>	VAF 226 or 232	3 VAF 253	3
VAF 204	3 VAF 226	3	VAF 304	3 VAF 326	3
VAH 201, 202, or 203 (Cap	3 VAF 253	3	VAR 299	0 VAH 201, 202, or 203	3
Arts)			ENG 200	3 CMM 100 (CAP	3
VAF 232	3 EDT 207	3		Communication)	
VAE 231	2 EDT 207L	0	CAP Natural Science	4 SSC 200 (CAP Social	3
VAR 299	0 VAH 201, 202, or 203	3		Science)	
ENG 200	3 CAP Natural Science	3		<b>16</b>	<b>18</b>
SSC 200 (CAP Social	3		<b>Third Year</b>		
Science)			<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
<b>17</b>	<b>15</b>		VAH 300 or 400 level	3 VAF 332 or 353	3
<b>Third Year</b>			VAF Emphasis	3 VAH 300/400 elective	3
<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>	VAF 332 or 353	3 VAF Emphasis	3
VAF 240	3 VAF 304	3	VAF 498 (CAP capstone)	3 Visual Arts elective	3
VAH 470 or 471	3 VAE 383	3	MTH (CAP Mathematics)	3 CAP Natural Science	3
EDT 305 (CAP Practical	3 VAH 470 or 471	3	Humanities: Adv History	3	
Ethical Action, Adv.PHL)			(CAP)		
MTH (CAP Mathematics)	3 EDT 340 (CAP Integrative,	3		<b>18</b>	<b>15</b>
	Diversity & Social Justice)		<b>Fourth Year</b>		
Visual Arts elective	6 EDT 340L	0	<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
	CAP Natural Science (CAP	4	VAF 499 (CAP Capstone)	1 VAF Emphasis	3
	Inquiry)		VAF Emphasis	3 Visual Arts elective	3
<b>18</b>	<b>16</b>		Visual Arts elective	3 Visual Arts elective	3
<b>Fourth Year</b>			Humanities: Adv Rel/ Faith	3 Social Science elective	3
<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>	Traditions (CAP)		
VAF 498 (CAP Capstone)	3 EDT 477	12	Inquiry (CAP)	3 Humanities: Adv PHL, Prac	3
VAE 483	3 VAF 499 (CAP Capstone)	1		Ethical Action (CAP)	
EDT 459	3 Visual Arts elective	3	Humanities: Integrative	3 Social Science: Diversity &	3
VAH 360, 382, or 480 (CAP	3		(CAP)	Social Justice (CAP)	
Adv. History)				<b>16</b>	<b>18</b>
REL (CAP Faith Traditions,	3				
Adv REL)					
Visual Arts electives	3				
<b>18</b>	<b>16</b>				

Total credit hours: 134

## Bachelor of Fine Arts, Fine Arts

### First Year

Fall	Hours Spring	Hours
VAR 100	1 VAF 117	3
VAF 104	3 VAF 204	3
VAF 112	3 VAF 216	3
VAP 101	3 ENG 100 (CAP Writing	3
	Seminar)	

HST 103, PHL 103, or REL	3 HST 103, PHL 103, or REL	3
103 (CAP Humanities)	103 (CAP Humanities)	
HST 103, PHL 103, or REL	3	
103 (CAP Humanities)		

Second Year	Hours Spring	Hours
VAH 201, 202, or 203 (CAP	3 VAF 226 or 232	3
Arts)		
VAF 226 or 232	3 VAF 253	3
VAF 304	3 VAF 326	3
VAR 299	0 VAH 201, 202, or 203	3
ENG 200	3 CMM 100 (CAP	3
	Communication)	
CAP Natural Science	4 SSC 200 (CAP Social	3
	Science)	
	<b>16</b>	<b>18</b>

Third Year	Hours Spring	Hours
<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
VAH 300 or 400 level	3 VAF 332 or 353	3
VAF Emphasis	3 VAH 300/400 elective	3
VAF 332 or 353	3 VAF Emphasis	3
VAF 498 (CAP capstone)	3 Visual Arts elective	3
MTH (CAP Mathematics)	3 CAP Natural Science	3
Humanities: Adv History	3	
(CAP)		
	<b>18</b>	<b>15</b>

Fourth Year	Hours Spring	Hours
<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
VAF 499 (CAP Capstone)	1 VAF Emphasis	3
VAF Emphasis	3 Visual Arts elective	3
Visual Arts elective	3 Visual Arts elective	3
Humanities: Adv Rel/ Faith	3 Social Science elective	3
Traditions (CAP)		
Inquiry (CAP)	3 Humanities: Adv PHL, Prac	3
	Ethical Action (CAP)	
Humanities: Integrative	3 Social Science: Diversity &	3
(CAP)	Social Justice (CAP)	
	<b>16</b>	<b>18</b>

Total credit hours: 132

## Bachelor of Fine Arts, Graphic Design

### First Year

Fall	Hours Spring	Hours
VAR 100	1 VAF 117	3
VAF 104	3 VAF 204	3
VAF 112	3 VAF 216	3
VAP 101	3 ENG 100 (CAP Humanities)	3
HST 103, PHL 103, or REL	3 HST 103, PHL 103, or REL	3
103 (CAP Humanities)	103 (CAP Humanities)	
HST 103, PHL 103, or REL	3	
103 (CAP Humanities)		
	<b>16</b>	<b>15</b>

**Second Year**

<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
VAD 220	3 VAD 245	3
VAD 240	3 VAF 226, 253, 240, 242, 232, or 370	3
VAH 201, 202, or 203 (CAP Arts)	3 VAH 201, 202, or 203	3
VAP 201, 240, 302, or 330	3 CMM 100 (CAP Communication)	3
VAR 299	0 SSC 200 (CAP Social Science)	3
ENG 200	3 MTH (CAP Mathematics)	3
	<b>15</b>	<b>18</b>

**Third Year**

<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
VAD 320	3 VAD 360	3
VAD 345	3 VAD 411	3
VAH 383	3 VAH 300/400	3
Visual Arts Elective	3 MKT/CMM Elective	3
CAP Natural Science	4 Natural Science (CAP Nat Sci/ Inquiry)	3
	Adv PHL/ Practical Ethical Action (CAP)	3
	<b>16</b>	<b>18</b>

**Fourth Year**

<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
VAD 412	3 VAD 499 (CAP Capstone)	1
VAD 498 (CAP Capstone)	3 VAD 415	3
Visual Arts elective	3 Visual Arts elective	3
MKT/CMM elective	3 Visual Arts elective	3
Adv REL/ Faith Traditions (CAP)	3 Adv HST/ Integrative (CAP)	3
	Diversity & Social Justice (CAP)	3
	<b>15</b>	<b>16</b>

Total credit hours: 129

**Bachelor of Fine Arts, Photography****First Year**

<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
VAR 100	1 VAF 117	3
VAF 104	3 VAF 216	3
VAF 112	3 VAP 201	3
VAP 101	3 ENG 100 (CAP Humanities)	3
HST 103, PHL 103, or REL 103 (CAP Humanities)	3 HST 103, PHL 103, or REL 103 (CAP Humanities)	3
HST 103, PHL 103, or REL 103 (CAP Humanities)	3	
	<b>16</b>	<b>15</b>

**Second Year**

<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
VAH 201, 202, or 203 (CAP Arts)	3 VAP 302	3
VAP 240	3 VAH 382 (CAP Adv History)	3

Visual Arts elective	3 VAP 320, 330, or 340	3
VAR 299	0 CAP Natural Science	3
ENG 200	3 SSC 200 (CAP Social Science)	3
CAP Natural Science	4 CMM 100 (CAP Communication)	3
	<b>16</b>	<b>18</b>

**Third Year**

<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
VAH 201, 202, or 203	3 VAP 410	3
VAP 320, 330, or 340	3 VAH 482	3
Visual Arts elective	5 VAP elective 300/400 level	3
MTH (CAP Mathematics)	3 Humanities	3
Humanities: Integrative (CAP)	3 Social Science	3
	<b>17</b>	<b>15</b>

**Fourth Year**

<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
VAP 498 (CAP Capstone)	3 VAP 499 (CAP Capstone)	1
VAH 480	3 VAP elective 300/400	3
VAP elective 300/400	3 Visual Arts elective	3
Social Science	3 Humanities	3
Humanities: Adv PHL/REL (Practical Ethical Action / Faith Traditions)(CAP)	3 Humanities: Adv PHL/REL (Practical Ethical Action / Faith Traditions)(CAP)	3
Inquiry (CAP)	3 Humanities: Diversity & Social Justice (CAP)	3
	<b>18</b>	<b>16</b>

Total credit hours: 131

**Visual Arts-Art Education Courses****VAE 101. Early Childhood Art Education. 2 Hours**

Acquaints students, especially those seeking Early Childhood Licensure, with the principles and concepts of art and with the various materials and techniques used in artistic expression. Open to all students. Studio fee.

**VAE 231. Introduction to Art Education. 2 Hours**

An introduction to the pedagogical, philosophical, and psychological aspects of teaching the arts. Topics will include: technology, national and state standards, history, learners with special needs, reading in the arts, and professional associations. Prerequisite(s): EDT 110, EDT 110L. Corequisite(s): Field experience.

**VAE 232. Integrating Visual Culture. 3 Hours**

Developing knowledge, skills, attitudes and pedagogical approaches to integrating visual culture theory and methodology into classrooms for early childhood, middle childhood and the adolescent learner.

**VAE 383. Foundation of Art Education. 3 Hours**

Introduction to the philosophy, history, and theory of teaching art to prekindergarten through grade eight students with varied needs and abilities. Art education majors only or permission. Prerequisite(s): EDT 110, EDT 110L, EDT 207, EDT 207L; permission of instructor and department chairperson. Corequisite(s): Field experience.



**VAE 483. Teaching Visual Arts. 3 Hours**

Study of curriculum, planning, theory, and practice for teaching visual arts to students grades seven through twelve. Art Education majors only. Prerequisite(s): EDT 110, EDT 110L, EDT 207, EDT 207L, EDT 208; VAE 231, VAE 383; permission of instructor and department chairperson. Corequisite(s): EDT 305, EDT 340, EDT 340L, EDT 459.

**VAE 483W. Elementary & Secondary School Art. 3 Hours**

Workshop to give the student of elementary and secondary education new approaches to teaching studio arts, art criticism, art history, and aesthetics.

**VAE 490. Special Problems. 1-6 Hours**

Course for advanced individual work in art education. Approval based on academic standing and permission of instructor. Repeatable up to fifteen semester hours. .

## Visual Arts-Art History Courses

**VAH 101. Introduction to the Visual Arts. 3 Hours**

Thematically-based, non-chronological introduction that covers the fundamental and varied roles that the visual arts have played and continue to play in the human experience. Open to all students.

**VAH 101H. Introduction to the Visual Arts. 3 Hours**

Thematically-based, non-chronological introduction that covers the fundamental and varied roles that the visual arts have played and continue to play in the human experience. Open to all students.

**VAH 129. Foundations in Art History. 3 Hours**

An introduction to the conceptual and evaluative practices undertaken in the study of art history, with an introduction to contemporary and global art histories. Students engage in a semester-long investigation of the question "What is art?" by researching diverse artistic practices from a variety of cultures and historical eras. Emphasis is placed on critical engagement with art and the development of a comparative approach to understanding the various roles art plays in society. This course is open to all majors, especially honors students, and is a required course for art history majors.

**VAH 129H. Foundations in Art History. 3 Hours**

An introduction to the conceptual and evaluative practices undertaken in the study of art history, with an introduction to contemporary and global art histories. Students engage in a semester-long investigation of the question "What is art?" by researching diverse artistic practices from a variety of cultures and historical eras. Emphasis is placed on critical engagement with art and the development of a comparative approach to understanding the various roles art plays in society. This course is open to all majors, especially honors students, and is a required course for art history majors.

**VAH 201. Survey of Art I. 3 Hours**

Survey of Western art from pre-history through the late medieval period. Open to all students.

**VAH 202. Survey of Art II. 3 Hours**

Survey of Western art from the late medieval period through the Baroque period.

**VAH 203. Survey of Art III. 3 Hours**

Survey of Western art from the mid-eighteenth to twenty-first centuries.

**VAH 320. Latin American Art. 3 Hours**

Survey of Latin American art history from the 19th century to the present. Prerequisite(s): HST 103.

**VAH 330. Arts of Asia. 3 Hours**

Survey of Asian art history from circa 1500 BC to the present. Open to all students.

**VAH 350. Western Architecture. 3 Hours**

Introduction to the history, theory, and practice of Western architecture from pre-history through the contemporary period. Open to all students.

**VAH 360. Art History & Feminism. 3 Hours**

Introduction to feminist approaches to art history and women artists from the medieval period to the present. Open to all students.

**VAH 370. Nineteenth Century Art I. 3 Hours**

Introduction to American art and architecture from the colonial period to the present. Open to all students.

**VAH 382. History of Photography I. 3 Hours**

History of the cultural, social, and aesthetic roles of photography from the camera obscura to 1945. Emphasis on the changing practice and perception of the medium. Open to all students.

**VAH 383. History of Graphic Design. 3 Hours**

Study of the significant developments, movements, and figures in the history of graphic design with an emphasis on the twentieth century. Open to all students.

**VAH 450. Italian Renaissance Art. 3 Hours**

Introduction to the painting, sculpture, and architecture of Italy between c. 1300 and c. 1550. Prerequisite(s): VAH 202 or permission of instructor and department chairperson.

**VAH 460. Baroque Art. 3 Hours**

Study of the major painters, sculptors, and architects of the seventeenth century. Prerequisite(s): VAH 202 or permission of instructor and department chairperson.

**VAH 470. Nineteenth Century Art I. 3 Hours**

Study of the major artists and movements in European art from Neo-Classicism to the beginnings of Realism. Prerequisite(s): VAH 203 or permission of instructor and department chairperson.

**VAH 471. Nineteenth Century Art II. 3 Hours**

Study of the major artists and movements in European art from Realism through Art Nouveau. Prerequisite(s): VAH 470 or permission of instructor and department chairperson.

**VAH 477H. Honors Thesis. 3 Hours**

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

**VAH 478H. Honors Thesis. 3 Hours**

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

**VAH 480. Twentieth Century Art I. 3 Hours**

Study of the major movements and artists in the painting, sculpture, architecture, and other media from 1900 to 1945. Open to all students.

**VAH 480H. 20th Century Art I. 3 Hours**

Study of the major movements and artists in the painting, sculpture, architecture, and other media from 1900 to 1945. Open to all students.

**VAH 482. History of Photography II. 3 Hours**

The history of photography from 1945 to the present. Examines the medium as a potent force in modern and contemporary culture and as a constantly evolving form of art and tool of communication. Open to all students.

**VAH 483. PostColonial and Global Art Histories. 3 Hours**

Study of the aesthetic philosophies and visual cultures from different regions of the world 1960 to the present. The course draws together perspectives on global cultures and diverse art histories in order to analyze broad social issues and postmodern cultural movements. Open to all students. Prerequisite(s): HST 103.

**VAH 485. Art History Seminar. 3 Hours**

Seminar and capstone reading and research course concentrating on one art historical topic for detailed analysis. May be repeated as topics change. Prerequisite(s): Permission of instructor.

**VAH 490. Special Problems. 1-5 Hours**

Advanced, independent study with faculty direction in art history. Prerequisite(s): One art history course or permission of instructor and department chairperson.

**VAH 490H. Special Problems. 1-5 Hours**

Advanced, independent study with faculty direction in art history. Prerequisite(s): One art history course or permission of instructor and department chairperson.

## Visual Arts-Fine Arts Courses

**VAF 104. Foundation Drawing. 3 Hours**

Introduction to basic visual concepts, various drawing media, and approaches to experimental technique. Emphasis on perspective, perceptual awareness, volume in space, and expressive freedom.

**VAF 112. Foundation 2-D Design. 3 Hours**

Study of the underlying elements and principles of design as they are used in two-dimensional composition and the creation of illusionistic three-dimensional space. .

**VAF 117. Foundation 3-D Design. 3 Hours**

Introduction to basic principles and practices of design in three dimensions. Emphasis on current theory and construction techniques using a variety of media and methods.

**VAF 203. Drawing Through the Process. 3 Hours**

An investigation and examination of the drawing process, of mark making, and experimental practices. An emphasis will be placed on contemporary, conceptual, and creative directions in drawing. Students are exposed to and challenged by a series of studio and research-based problems that test the limitations and hidden opportunities within established drawing habits and conventional practices.

**VAF 203H. Drawing Through the Process. 3 Hours**

An investigation and examination of the drawing process, of mark making, and experimental practices. An emphasis will be placed on contemporary, conceptual, and creative directions in drawing. Students are exposed to and challenged by a series of studio and research-based problems that test the limitations and hidden opportunities within established drawing habits and conventional practices.

**VAF 204. Drawing II. 3 Hours**

Emphasis on figure drawing with work from the nude model and the skeleton. Study of proportion, rendering volume, and developing expressive drawing skills in a variety of drawing media. Prerequisite(s): VAF 104.

**VAF 216. Design & Color. 3 Hours**

The study of color based on historical and contemporary color theories and the use of color in expressing and integrating design concepts. Prerequisite(s): VAF 112 or permission of department chairperson.

**VAF 225. Painting for Non-Majors. 3 Hours**

Introduction to the history, fundamental principles, materials, tools, and methods of painting, emphasizing the spatial and expressive qualities of color, composition, and pictorial design. Not open to majors or minors in the Department of Visual Arts.

**VAF 226. Painting I. 3 Hours**

Introduction to basic painting principles, techniques, and materials; still life, landscape, figure, and abstraction. Prerequisite(s): (VAF 104, VAF 112, VAF 216) or permission of department chairperson.

**VAF 228. Watercolor I. 3 Hours**

Principles and techniques of transparent watercolor. Emphasis on technical mastery. Prerequisite(s): (VAF 104, VAF 112, VAF 216) or permission of department chairperson.

**VAF 232. Sculpture I. 3 Hours**

Consideration of forms as a means of developing an understanding of mass, shape, and control of medium. The use of various materials such as wood, plaster, and clay, with emphasis on integrating material with personal expression.

**VAF 240. Ceramics I. 3 Hours**

Introduction to basic methods of working in clay using coil and slab techniques.

**VAF 242. Ceramics II: Wheel Throwing. 3 Hours**

Introduction to basic methods of working clay using the wheel.

**VAF 253. Printmaking I. 3 Hours**

Introduction to the traditional printmaking methods of woodcut and intaglio. Instruction in edition-printing techniques and curating of prints. . Prerequisite(s): (VAF 104, VAF 112) or permission of department chairperson.

**VAF 304. Drawing III. 3 Hours**

Continuation of work done in VAF 204 with an emphasis on the development of finished figure drawings. Study of anatomy and the rendering of convincing volumes in space. Prerequisite(s): VAF 204.

**VAF 325. Figure Painting. 3 Hours**

Painting from the model with a variety of media. Traditional and contemporary approaches to the figure. Prerequisite(s): ((VAF 204 or VAF 304), VAF 226) or permission of department chairperson.

**VAF 326. Painting II. 3 Hours**

Painting with oils or acrylics; continuing study of the principles and techniques of painting, with emphasis on personal expression and experimentation. Prerequisite(s): (VAF 226 or VAF 228) or permission of department chairperson.

**VAF 328. Watercolor II. 3 Hours**

Continuing investigation of watercolor techniques, both traditional and experimental. Still life, figure, landscape, and abstraction. Prerequisite(s): VAF 228 or permission of department chairperson.

**VAF 332. Sculpture II. 3 Hours**

Continued exploration of three-dimensional concepts and materials, concentrating on wood, stone, and metal. Prerequisite(s): VAF 232 or permission of department chairperson.

**VAF 342. Ceramics III. 3 Hours**

Expanded exploration of skills, concepts, and processes introduced in VAF 240 hand building or VAF 242 wheel thrown ceramic forms, with emphasis on building techniques, materials, glazing, and firing processes. Prerequisite(s): (VAF 240 or 242) or permission of instructor.

**VAF 353. Printmaking II. 3 Hours**

Advanced work in woodcut, monoprint and intaglio, including acrylic process and color etchings. Prerequisite(s): VAF 253.

**VAF 370. Illustration I. 3 Hours**

Attention to conceptual, visual, and technical development. Exploration of media and techniques employed by the illustrator in creating images for printed communication. Prerequisite(s): VAF 104, VAF 204.

**VAF 380. Illustration II. 3 Hours**

Interpretation and representation of concepts, products, or stories for magazines, books, newspapers, and advertising. Continued technical development with a variety of materials, media, and techniques. Prerequisite(s): VAF 370.

**VAF 404. Drawing IV. 3 Hours**

Observational and expressive drawing. Continued work with the figure in combination with a variety of other subject matter. Emphasis on the development of a body of work with a related idea.. Prerequisite(s): (VAF 204, VAF 304) or permission of department chairperson.

**VAF 426. Painting III. 3 Hours**

Directed advanced studio problems; contemporary issues in painting. Repeatable up to nine semester hours. Studio fee. Prerequisite(s): (VAF 325 or VAF 326) or permission of department chairperson.

**VAF 442. Ceramics IV. 3 Hours**

Investigation of advanced studio topics within ceramics. Problems structured to encourage technical, conceptual, and aesthetic exploration leading to the creation of a cohesive body of work. May be repeated as topics change. Prerequisite(s): VAF 342 or permission of instructor.

**VAF 453. Printmaking III. 3 Hours**

Advanced work in printmaking processes with an emphasis on the production of multi-color editions. Prerequisite(s): VAF 353.

**VAF 470. Illustration III. 3 Hours**

Focus on developing an individual point of view and illustration style. Prerequisite(s): VAF 380.

**VAF 477H. Honors Thesis. 3 Hours**

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the departmental chairpersons. Prerequisite(s): Approval of University Honors Program.

**VAF 478H. Honors Thesis. 3 Hours**

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

**VAF 490. Special Problems. 1-5 Hours**

Course for advanced individual work in fine arts. Approval based on academic standing and permission of instructor. Repeatable up to fifteen semester hours.

**VAF 498. Senior/Professional Seminar- Fine Arts. 3 Hours**

Capstone course required of all B.A. and B.F.A. fine arts and art education (E11) majors, to be taken in the first semester of the senior year. Examination of aesthetic, cultural, ethical, and pragmatic issues in preparation for post-graduate experience. Prerequisite(s): Junior standing.

**VAF 499. Portfolio & Paper- Fine Arts. 1 Hour**

Completion and presentation of undergraduate portfolio and paper, to be reviewed by faculty and peers. Faculty approval of portfolio and paper is required for graduation. Prerequisite(s): VAF 498 or permission of department chairperson.

**Visual Arts-Graphic Design Courses****VAD 211. Fundamentals of Visual Communication Design. 3 Hours**

Course for non-majors in the basics of design for communication. Attention to page layout, typography, image, graphic style, and information delivery.

**VAD 220. Design Processes I. 3 Hours**

Introduction to the processes of graphic design, specifically computer applications, equipment, and concepts as related to print and electronic based graphic design. Additionally, students engage in a survey of materials, assembly strategies, and various vehicles for the designed message. Prerequisite(s): VAF 112.

**VAD 240. Form & Concept. 3 Hours**

Exploration of visual form as means to convey content and meaning. Students enlist principles from art and design foundation courses within the context of graphic design. Design methodologies are introduced and explored, while process and hand skills are stressed. Prerequisite(s): VAF 112, VAF 216.

**VAD 245. Typography I. 3 Hours**

Investigation of the history, tradition, discipline, and function of typography as related to visual and verbal communication. Technical, formal, and semantic aspects are explored. Structure, space, and sequence, critical to the typographic message, are stressed. Prerequisite(s): VAD 220, VAD 240.

**VAD 307. Drawing for Graphic Design. 2 Hours**

Exploration of materials, procedures, and drawing techniques for design presentations. Prerequisite(s): VAF 104.

**VAD 310. Computer Illustration. 3 Hours**

Exploration of the use of the computer as tool and medium for the creation and production of image and illustration for print and electronic graphic design. Prerequisite(s): VAD 220, VAD 240.

**VAD 318. Graphic Design for Three Dimensions. 3 Hours**

Application of graphic design principles to packaging, product, exhibition, and environmental design. Prerequisite(s): VAD 240, VAD 245; VAF 117.

**VAD 320. Design Processes II. 3 Hours**

Advanced exploration into the use of computer technology as means and medium for the implementation, production, and presentation of graphic design. Print design and production, as well as commercial printing pre-press are emphasized with additional attention given to production for electronic design vehicles. Prerequisite(s): VAD 220, VAD 240, VAD 245.

**VAD 345. Typography II. 3 Hours**

The advanced study of typographic design. Attention to the aesthetic and informational qualities of type in print and electronic communication. Prerequisite(s): VAD 245.

**VAD 351. Motion Design. 3 Hours**

Exploration of the generation and application of motion in visual communication. This course builds on graphic design form, methods, technique, and principles to generate dynamic messaging using type, sound, image, and animation. While the computer and appropriate applications are primary tools, hand generated methods for concept and storyboarding are stressed as well. Prerequisite(s): VAD 220, VAD 240, VAD 245, VAD 320.

**VAD 355. Interaction Design. 3 Hours**

Investigation of the use of interactivity as applied to the digital and analog landscape. Focus on the design of richly interactive interfaces for current and emerging media (computers, mobile, touch etc.). While some emphasis is on the development and implementation of design vehicles, decided attention is paid to concept and visual effectiveness. Prerequisite(s): VAD 220, VAD 240, VAD 245, VAD 320.

**VAD 360. Web Design. 3 Hours**

Investigation of the processes of web design, including concept, information architecture, navigation, interface, and standard languages and technologies for the delivery of content and information. Organization, aesthetics, and user experience are discussed and explored. Prerequisite(s): VAD 220, VAD 240, VAD 245, VAD 320.

**VAD 395. Advertising Design. 3 Hours**

Emphasis on print advertising, its creation and presentation. Concept development and attention to advertising layouts that carry motivating images and messages to consumers about products, services, or ideas.

**VAD 411. Graphic Design I. 3 Hours**

Development of methodologies utilized for the purpose of generating concepts and effective communication within the context of graphic design. Attention is given to pragmatic and semantic relationships between elements such as typography, image, space, and color. Prerequisite(s): VAD 220, VAD 240, VAD 245, VAD 320.

**VAD 412. Graphic Design II. 3 Hours**

Development of methodologies utilized for the purpose of generating concepts and effective communication within the context of graphic design. Attention is given to pragmatic and semantic relationships between elements such as typography, image, space, and color. Prerequisite(s): VAD 220, VAD 240, VAD 245, VAD 320, VAD 411.

**VAD 414. Trademark Design. 3 Hours**

Advanced study of marks, logos, and symbols as communication and identification elements. Emphasis on conceiving design marks of identity for small businesses, corporations, institutions, products, and/or services. Prerequisite(s): VAD 411.

**VAD 415. Graphic Design III. 3 Hours**

The study and design of identification and image systems for products, organizations, institutions, or corporations. Emphasis on continuity in the application of visual communication factors. Prerequisite(s): VAD 412 or permission of department chairperson.

**VAD 477H. Honors Thesis. 3 Hours**

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

**VAD 478H. Honors Thesis. 3 Hours**

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

**VAD 480. Graphic Design Internship. 1-3 Hours**

Opportunities for practical experience in professional working environments. Repeatable up to nine semester hours. Prerequisite(s): Permission of department chairperson.

**VAD 490. Special Problems. 1-3 Hours**

A course for advanced individual work in design. Approval based on academic standing and permission of instructor. Repeatable up to fifteen semester hours.

**VAD 498. Senior/Professional Seminar - Graphic Design. 3 Hours**

Capstone course required of all B.F.A. graphic design majors, to be taken in the fall term of the senior year. Examination of aesthetic, cultural, ethical, and pragmatic issues in preparation for post-graduate experience. Prerequisite(s): Senior standing or permission of department chairperson.

**VAD 499. Portfolio and Paper - Graphic Design. 1 Hour**

Completion and presentation of undergraduate portfolio and paper, to be reviewed by faculty, peers, and professionals in a public forum. Faculty approval of portfolio and paper is required for graduation. Prerequisite(s): VAD 498 or permission of department chairperson.

## Visual Arts-Photography Courses

**VAP 100. Darkroom Photography for Non-Majors. 3 Hours**

Emphasis on learning and exploring the visual language of lens-based photographic imagery through a series of technical and creative darkroom assignments. Black and white film and chemical processes will be utilized in the creation of photographs. Students gain an understanding of technical and creative control as well as conceptual practices associated with the medium. This course does not fulfill requirements within the Department of Visual Arts. Studio fee.

**VAP 101. Foundation Photography. 3 Hours**

Fundamentals of black-and-white still photography, including camera function, exposure, film processing, and printing, with an emphasis on learning the visual language of photographic imagery through a series of creative assignments.



**VAP 200. Digital Photography for Non-Majors. 3 Hours**

An emphasis on learning and exploring the visual language of lens-based digital photographic imagery through a series of technical and creative digital assignments. Using various types of digital capture devices, some examples are cell phones, consumer grade digital cameras and scanners. Macintosh computers, and Adobe Photoshop software will be utilized in the creation of photographs. Students gain an understanding of technical and creative control as well as conceptual practices associated with the digital photographic medium. Course does not fulfill Visual Arts degree requirements.

**VAP 201. Photography II. 3 Hours**

Variety of challenging projects develop increased technical competence, greater visual awareness, personal expression, and sustained creative growth. Prerequisite(s): VAP 101 or equivalent.

**VAP 240. Digital Processes I. 3 Hours**

Introduction to the practice, theory, aesthetics, and ethics of digital photography, including direct capture, scanning, enhancement, compositing, manipulation, and high-quality printing. Prerequisite(s): VAP 101 or permission of department chairperson.

**VAP 302. Color Photography I. 3 Hours**

Introduction to techniques and aesthetics of color photography. Students utilize color sensitive films, papers, and digital technologies in the exploration of color photography. Prerequisite(s): (VAP 101, VAP 240) or permission of department chairperson.

**VAP 320. Studio Practice I. 3 Hours**

Extensive use of large format camera, studio grip equipment, tungsten and electronic flash lighting techniques; still-life and portrait photography in a studio environment. Prerequisite(s): VAP 201.

**VAP 321. Studio Practice II. 3 Hours**

Emphasis on the production of a professional-quality portfolio which will demonstrate advanced knowledge of the studio and image production. Prerequisite(s): VAP 320.

**VAP 330. Alternative Photography I. 3 Hours**

Introduction to specialized image production utilizing silver and non-silver photographic processes. Emphasis on technical and aesthetic aspects of alternative photographic practice. Prerequisite(s): VAP 101.

**VAP 331. Alternative Photography II. 3 Hours**

Continuing work with alternative silver and non-silver processes. Emphasis on completion of an artist book or installation which demonstrates advanced technical command and aesthetic understanding of the processes employed. Prerequisite(s): VAP 330.

**VAP 340. Digital Processes II. 3 Hours**

Expands on the practice and theory of digital photography and computer imaging. Emphasis is placed on the creation of a cohesive portfolio of digital artwork through the exploration of advanced digital methodologies and concepts. The course will also focus on the different modes of dissemination relevant to digital images. Prerequisite(s): VAP 240.

**VAP 350. View Camera. 3 Hours**

Extensive experience with the view camera, examination of refined techniques, various applications, and concepts of large format photography. Prerequisite(s): VAP 201.

**VAP 402. Color Photography II. 3 Hours**

Continuation of color printing from negatives; completion of individual projects which will demonstrate an advanced understanding of the techniques and aesthetics peculiar to color photography. Prerequisite(s): VAP 302.

**VAP 410. Advanced Photography. 3 Hours**

Students with a substantial commitment to photography and with demonstrated technical skills work on individual projects and participate in group critiques and discussions. Prerequisite(s): VAP 382 or VAP 482; VAP 201, VAP 302.

**VAP 420. Photojournalism. 3 Hours**

Variety of ways of using photography as documentation, narrative, and propaganda. Editing of work, layout, and image-text relationships. Personal photographic essay required. Prerequisite(s): VAP 201.

**VAP 430. Professional Photographic Applications. 3 Hours**

Problem-solving associated with professional photography; may include commercial, editorial, industrial, architectural, and illustrative photographic work both in the studio and on location. Prerequisite(s): VAP 320 or permission of department chairperson.

**VAP 450. Photography Internship. 1-3 Hours**

Practical applications of photographic skills. Opportunities for advanced development and practical experience in professional working environments. Repeatable up to six semester hours for B.F.A. students. Prerequisite(s): Permission of department chairperson.

**VAP 477H. Honors Thesis. 3 Hours**

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

**VAP 478H. Honors Thesis. 3 Hours**

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

**VAP 490. Special Problems in Photography. 1-5 Hours**

Series of assignments to guide independent study in photography, formulated to meet individual needs of the student. Prerequisite(s): VAP 201; permission of department chairperson.

**VAP 498. Senior/Professional Seminar- Photography. 3 Hours**

Capstone course required of all B.A. and B.F.A. photography majors, to be taken in the first semester of the senior year. Examination of aesthetic, cultural, ethical, and pragmatic issues in preparation for post-graduate experience. Prerequisite(s): (VAP 410; senior standing) or permission of department chairperson.

**VAP 499. Portfolio and Paper. 1 Hour**

Completion and presentation of an undergraduate portfolio and a comprehensive paper that surveys the student's undergraduate career in the major and also serves as the foundation for a formal, public presentation that is reviewed by faculty and peers. Faculty approval of the portfolio and the paper is required for graduation. Prerequisite(s): VAP 498 or permission of department chairperson.

## Visual Arts Courses

### VAR 100. Visual Arts Foundation. 1 Hour

Defines and examines the process of beginning a program of education in the visual arts within the larger context of the College of Arts and Sciences and the University. Integrates pragmatic and conceptual issues critical to liberal learning for visual arts students.

### VAR 210. Visual Journal. 3 Hours

Students document and interpret their experience of a given site through the creation of unique journals. They create, collect, edit, and juxtapose visual materials in combination with written commentary and reflections.

### VAR 220. Visual Resources. 3 Hours

Students study a wide variety of visual elements, including many forms of visual communication as well as architecture, public spaces, and museums, in order to understand ways in which art and design play key roles in defining the unique cultural environment of a given site.

### VAR 299. Second Year Review. 0 Hours

Requires successful completion of Visual Arts Second Year Review. Eligibility for the review is determined by the department and is based upon a student's progress within the major. Visual Arts Scholarship recipients complete this course during their second year in the major. The review is based upon prior Visual Arts coursework completed and in progress at the time of the review. Required for all Visual Arts majors.

### VAR 345. Computer Modeling & Animation I. 3 Hours

Introduction to history, theory, and practice of three-dimensional computer modeling and animation for video, computer, and print media. Visualization, Cartesian space, simple polygonal modeling, surface rendering, and animation techniques will be explored.

### VAR 440. Computer Modeling & Animation II. 3 Hours

Detailed study of spline-based modeling, surface rendering and mapping, editing complex animation sequences, motion control, and other topics. Prerequisite(s): VAR 345.

### VAR 445. Computer Modeling & Animation III. 3 Hours

Individual projects in conceptualization and production of animated sequence from storyboard to final presentation. Prerequisite(s): VAR 440.

### VAR 477H. Honors Thesis. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

### VAR 478H. Honors Thesis. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

### VAR 490. Special Problems. 1-5 Hours

Advanced, independent study with faculty direction in a visual arts subject or topic that is not covered in existing, discipline-specific courses. Permission.

### VAR 495. Senior Project Seminar. 1 Hour

The first in a sequence of two capstone courses. To be taken in the first semester of the senior year. Required for all Bachelor of Arts with a major in Visual Arts degrees. Students select a faculty mentor committee and work with that committee to establish a capstone project topic, goals, outcomes, and timeline associated with the project. Prerequisite(s): Senior standing. VAR majors only or permission of department chairperson.

### VAR 496. Project, Presentation & Paper. 3 Hours

The second of two capstone courses leading to graduation. To be taken in the second semester of the senior year. Students complete a senior project and paper, and give a public presentation regarding the project to be reviewed by faculty and peers. Faculty approval of project and paper is required for graduation. Prerequisite(s): VAR 495 or permission of department chairperson.

## Arts Administration

The minor in Arts Administration provides an introductory background to students with an interest in the management of non-profit arts and community organizations. Eligible students are declared majors or minors in music, theatre, and visual arts, or majors in business. The minor offers two tracks depending on the student's major. It provides Arts students with an introductory foundation in business and economics, and SBA students with further literature and practical study in the arts. Core courses explore special issues and challenges that the art community faces today. The minor integrates classroom study with real-world experiences with area arts organizations. The Arts Administration minor requires 19 semester hours, including seven semester hours of core interdisciplinary courses.

### Arts Administration Committee

Sharon Gratto (Music), Coordinator  
Judith Huacuja (Art and Design), Brian LaDuca (Art Street), Rebecca Wells (School of Business Administration)

## Minor in Arts Administration (AAD)

### Arts Administration - Track A (required for visual arts, music and theatre majors and minors)

AAD 301	Introduction to Arts Administration	3
AAD 498	Arts Administration Internship	1-3
ACC 200	Introduction to Accounting	3
ECO 203	Principles of Microeconomics	3
Select two courses from:		6
FIN 301	Introduction to Financial Management	
MGT 201	Legal Environment of Business	
MKT 300	Survey of Marketing	
OPS 300	Introduction to Operations & Supply Management	

Total Hours

16-18

### Arts Administration - Track B (required for business majors)

AAD 301	Introduction to Arts Administration	3
AAD 498	Arts Administration Internship	1-3
Select three courses from two areas:		9

#### Music <sup>1</sup>

MUS 201	Music In Concert
MUS 202	Professional Development Workshop

MUS 302	Music History & Literature II	
MUS 303	Introduction to Musics of the World	
<b>Theatre/Dance</b>		
THR 105	Introduction to Theatre	
THR 415	History of the Theatre I	
THR 425	History of Theatre II	
<b>Visual Arts</b>		
VAH 101	Introduction to the Visual Arts	
VAH 201	Survey of Art I	
VAH 202	Survey of Art II	
VAH 203	Survey of Art III	
Select courses from performance or creative arts:		3
MUS 191	Voice Class	
MUS 195	Beginning Guitar Class I	
MUS 196	Group Piano I	
MUS 295	Beginning Guitar Class II	
MUS 296 & MUS 297	Functional Keyboard Skills I and Functional Keyboard Skills II	
MUS 390	Ensembles	
MUS 399	Performance Studies	
MUS 491	University Orchestra	
MUS 492	Symponic Wind Ensemble	
MUS 493	University Chorale	
THR 100	Theatre Laboratory	
THR 201	Basic Dance for the Performing Artist	
THR 251	Beginning Tap Dance	
THR 261	Beginning Jazz Dance	
THR 271	Beginning Ballet	
THR 305	Theatre Stagecraft	
THR 307	Theatre Lighting	
THR 310	Acting I	
THR 312	Film & Television Acting	
THR 320	Movement & Voice for the Stage	
THR 330	Concepts of Scene Design	
VAD 215	Computer Applications- Design	
VAD 218	Computer Applications- Illustration	
VAD 220	Design Processes I	
VAF 104	Foundation Drawing	
VAF 112	Foundation 2-D Design	
VAP 101	Foundation Photography	
Total Hours		16-18

<sup>1</sup> Other courses may be selected with approval.

## Courses

### AAD 301. Introduction to Arts Administration. 3 Hours

Interdisciplinary introduction to the fundamental principles and applications of managing a non-profit arts organization. Study of strategies and tools for effective arts management. Recommended for students with a background in the arts and/or business.

### AAD 498. Arts Administration Internship. 1-3 Hours

Arts administration work experience in an approved organization. Student must be in good academic standing. Students are limited to a maximum of three semester hours. Prerequisite(s): AAD 301; UDI 371; permission of program advisor.

## Biology

Majors:

- Bachelor of Science, Biology (p. 129)
- Bachelor of Science, Environmental Biology (p. 131)

Minor:

- Biology (p. 132)

The Bachelor of Science program in biology is designed to prepare a student for a career in the life sciences. Graduates of the program are competitive for entry into graduate programs in the biological sciences as well as professional schools, such as medical, dental, osteopathic, and veterinary science, as well as physician assistant (PA) and advanced nursing programs.

The department has two primary areas of focus:

1. Basic biomedical science
2. Environmental/ecological science

Biomedical science course offerings includes:

- Molecular biology
- Cell biology
- General and medical microbiology
- Immunology
- Genetics
- Mammalian physiology
- Developmental biology

Environmental/ecological science course offerings include:

- Ecology
- Population biology
- Ecological physiology
- Environmental microbiology
- Community and restoration ecology
- Entomology and analysis of biological data
- Evolutionary biology
- Plant physiology
- Environmental biology in the narrow sense

In addition, advanced undergraduates may enroll in graduate courses for undergraduate credit with the consent of the chairperson. In line with the two areas of research interests, the department encourages students (in consultation with their advisors) to declare one of the two as an area of concentration of study no later than the end of their sophomore year. For the student more interested in a broad approach to biology, the department recommends a third option, the general biology option (any combination of upper-level biology courses that fulfills the program requirements).

The department offers a research mentorship program for upper-level students majoring in biology. The program allows a student to work closely with both faculty and graduate students in laboratory and/or field research. Participation in the program is based on the recommendation of a member of the faculty. The mentorship program is designed to provide a significant advantage for those students who intend to enter a graduate program.

The department also offers a combined five-year Bachelor and Master of Science (5Y B.S.-M.S.) degree in Biology. This accelerated program is designed for students who display strong potential for research in biology. It provides a liberal arts education, a broad background in biology, the development of expertise in a biological subfield and a thorough introduction to research instrumentation and techniques. Graduates from the program are prepared for either direct entry into the job market or continuation toward the Ph.D. A detailed description of the five-year B.S.-M.S. program may be obtained from the departmental office.

A minor in biology consists of 20 semester hours.

### Faculty

Mark Nielsen, Chairperson

Distinguished Service Professor: Noland

Professors Emeriti: Chantell, Geiger, Ramsey, Rowe

Professors: Burky, Kearns, Robinson, Tsonis, P. Williams

Associate Professors: Frieze, Krane, McEwan, Nielsen, Singh, D. Wright, S. Wright

Assistant Professors: Hansen, Kango-Singh, Pitychoutis, Sun, T. Williams

Lecturers: Dillon, Kavanaugh, Klco, Nickell

## Bachelor of Science with a Major in Biology (bio) Minimum 120 Hours

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
HST 103 West and the World	
REL 103 Introduction to Religious and Theological Studies	
PHL 103 Intro To Philosophy	
ENG 100 Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>	0-3
ENG 200 Writing Seminar II	
Oral Communication	3
CMM 100 Principles of Oral Communication	
Mathematics	3
Social Science	3
Arts	3
Natural Sciences <sup>4</sup>	7
Crossing Boundaries	variable credit
Faith Traditions	
Practical Ethical Action	
Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	

### Historical Studies

Diversity and Social Justice	3
Major Capstone	0-3

- 1 Completed with ASI 110 and ASI 120.
- 2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
- 3 Completed with ENG 200H or ASI 120.
- 4 Must include two different disciplines and accompanying lab.

### Science Breadth Requirements

(Satisfies CAP Mathematics and CAP Natural Science)

CHM 123 & 123L	General Chemistry and General Chemistry Laboratory	4
CHM 124 & 124L	General Chemistry and General Chemistry Laboratory	4
CHM 313 & 313L	Organic Chemistry and Organic Chemistry Laboratory	4
CHM 314 & 314L	Organic Chemistry and Organic Chemistry Laboratory	4
PHY 201 & 201L	General Physics and General Physics Laboratory	4
PHY 202 & 202L	General Physics and General Physics Laboratory	4
Select one mathematics sequence from:		6-8
MTH 116 & MTH 148	Precalculus Math and Introductory Calculus I	
MTH 148 & MTH 149	Introductory Calculus I and Introductory Calculus II	
MTH 168 & MTH 169	Analytic Geometry & Calculus I and Analytic Geometry & Calculus II	

### Major Requirements <sup>1, 6</sup>

BIO 151 & 151L	Concepts of Biology I: Cell & Molecular Biology and Concepts of Biology Laboratory: Cell & Molecular Biology	4
BIO 152 & 152L	Concepts of Biology II: Evolution & Ecology and Concepts of Biology Laboratory II: Evolution & Ecology	4
BIO 299	Biology Seminar	1
BIO 310	Ecology	3
BIO 312	General Genetics	3
BIO 420	Seminar (Satisfies Cap Major Capstone)	1
Select two environmental/ecological courses from: <sup>2, 6</sup>		7
BIO 301	Evolution	
BIO 309 & 309L	Comparative Anatomy of the Vertebrates and Comparative Anatomy Laboratory	
BIO 310L	Ecology Laboratory	
BIO 311	Introductory Entomology	
BIO 312L	Genetics Laboratory	
BIO 314 & 314L	Plant Biology and Plant Biology Laboratory	
BIO 320 & 320L	Marine Biology and Marine Biology Laboratory	



BIO 340 & 340L	Culture, Biodiversity & Resources Management and Culture, Biodiversity & Resources Management Laboratory
BIO 359	Sustainability & the Biosphere
BIO 360 & 360L	Island Environmental Biology and Island Environmental Biology Laboratory
BIO 370	Conservation Biology
BIO 402 & 402L	Vertebrate Zoology and Vertebrate Zoology Laboratory
BIO 407 & 407L	Plant Diversity & Ecology and Plant Diversity & Ecology Laboratory
BIO 409 & 409L	Ecological Restoration and Ecological Restoration Laboratory
BIO 411 & 411L	General Microbiology and General Microbiology Laboratory
BIO 421	Biological Problems <sup>4</sup>
BIO 435 & 435L	Microbial Ecology and Microbial Ecology Laboratory
BIO 439	Analysis & Interpretation of Biological Data
BIO 441	Environmental Plant Biology
BIO 445	Evolution & Development
BIO 450 & 450L	Comparative Animal Physiology and Comparative Animal Physiology Laboratory
BIO 452 & 452L	Biology of Rivers & Lakes and Biology of Rivers & Lakes Laboratory
BIO 459 & 459L	Environmental Ecology and Environmental Ecology Laboratory
BIO 460	Introduction to Bioinformatics
BIO 461 & 461L	Invertebrate Zoology and Invertebrate Zoology Laboratory
BIO 465	Disease Ecology
BIO 480 & 480L	Principles of Microscopy and Principles of Microscopy Laboratory
BIO 489	Mycology

Select two basic biomedical courses from: <sup>3, 6</sup> 7

BIO 301	Evolution
BIO 309 & 309L	Comparative Anatomy of the Vertebrates and Comparative Anatomy Laboratory
BIO 311	Introductory Entomology
BIO 312L	Genetics Laboratory
BIO 403 & 403L	Physiology I and Physiology Laboratory I
BIO 404	Physiology II
BIO 411 & 411L	General Microbiology and General Microbiology Laboratory
BIO 412	Genetics Human Diseases
BIO 415	Neurobiology
BIO 421	Biological Problems <sup>4</sup>
BIO 427	Immunology
BIO 439	Analysis & Interpretation of Biological Data
BIO 440 & 440L	Cell Biology and Cell Biology Laboratory
BIO 442 & 442L	Developmental Biology and Developmental Biology Laboratory

BIO 445	Evolution & Development
BIO 460	Introduction to Bioinformatics
BIO 461 & 461L	Invertebrate Zoology and Invertebrate Zoology Laboratory
BIO 462	Molecular Biology
BIO 465	Disease Ecology
BIO 466	Biology of Infectious Disease
BIO 470	Cancer Biology
BIO 475 & 475L	Human Anatomy and Human Anatomy Laboratory
BIO 480 & 480L	Principles of Microscopy and Principles of Microscopy Laboratory
BIO 489	Mycology
CHM 420	Biochemistry

Select four electives, two with accompanying labs, from the group 14  
above. <sup>5, 6</sup>

### Breadth <sup>7</sup>

ASI 150	Introduction to the University Experience	1
Social & Behavioral Sciences (includes CAP Social Science)		6
Total Hours to total at least		120

<sup>1</sup> The Department of Biology supports national standards established by the National Institutes of Health for the responsible, humane treatment and housing of animals. The biology curriculum contains some laboratory courses in which dissection and vivisection are necessary and required in order to convey an understanding of certain biological concepts. All students are expected to participate in such laboratory exercises in the introductory biology sequence, BIO 151L and BIO 152L which involve dissection and/or vivisection. In other elective formal laboratory courses in which dissection and vivisection occur, it is expected that students will participate in all aspects of the laboratory. No alternatives to dissection or vivisection will be offered in these courses. It is ultimately the responsibility of students to make certain that they enroll in courses in which they are able to participate in all required exercises, and to obtain information from each instructor as to the specific laboratory course content and requirements. The Department of Biology maintains an updated list of laboratory courses in which dissection and/or vivisection is required in order to assist students in the selection of course work.

<sup>2</sup> One with accompanying laboratory.

<sup>3</sup> One with accompanying laboratory. BIO 462 strongly recommended as one of two courses.

<sup>4</sup> By permission only. Qualifies as a laboratory elective for any category.

<sup>5</sup> One of the following Non-BIO science courses may include: CHM 201, CHM 302, CHM 303, CHM 420, MTH 367, CPS 107, CPS 111, CPS 132, GEO 208, GEO 308, GEO 401, Other Non-BIO science courses may be included with the approval of the chairperson.

<sup>6</sup> A minimum grade of C- is required.

<sup>7</sup> HST 340, HST 341 or HST 342 are highly recommended.

## Bachelor of Science with a Major in Environmental Biology (evb) Minimum 120 Hours

Environmental biology is a science specialization based upon the fundamentals of biology and ecology, applying interdisciplinary skills, knowledge and principles to the environmental problems facing society today. Students entering this dynamic field could become directly involved in addressing some of the significant global problems related to human impact on the environment. In addition to the standard base of courses required of most biology majors, the curriculum also requires a challenging core of environmentally related science courses and course work drawn from a multidisciplinary elective pool that includes offerings in the humanities and social sciences.

Internship Program: Majors will participate in the EVB internship program (BIO 499, see course prerequisites), where they will have the unique opportunity to obtain valuable training and experience under the mentorship of established scientists and other environmental professionals.

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
HST 103 West and the World	
REL 103 Introduction to Religious and Theological Studies	
PHL 103 Intro To Philosophy	
ENG 100 Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>	0-3
ENG 200 Writing Seminar II	
Oral Communication	3
CMM 100 Principles of Oral Communication	
Mathematics	3
Social Science	3
Arts	3
Natural Sciences <sup>4</sup>	7
Crossing Boundaries	variable credit
Faith Traditions	
Practical Ethical Action	
Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

### Science Breadth Requirements

(Satisfies CAP Mathematics and CAP Natural Science)

CHM 123 & 123L	General Chemistry and General Chemistry Laboratory	4
CHM 124 & 124L	General Chemistry and General Chemistry Laboratory	4
CHM 313 & 313L	Organic Chemistry and Organic Chemistry Laboratory	4
CHM 314 & 314L	Organic Chemistry and Organic Chemistry Laboratory	4
GEO 115 & 115L	Physical Geology and Physical Geology Laboratory	4
GEO 116 & 116L	Geological History of the Earth and Geological History of the Earth Laboratory	4
MTH 367	Statistical Methods I <sup>2</sup>	3
PHY 201 & 201L	General Physics and General Physics Laboratory	4
PHY 202 & 202L	General Physics and General Physics Laboratory	4
Select one sequence from:		6-8
MTH 148 & MTH 149	Introductory Calculus I and Introductory Calculus II	
MTH 168 & MTH 169	Analytic Geometry & Calculus I and Analytic Geometry & Calculus II <sup>1</sup>	
Select one course from:		3-4
GEO 307	Geomorphology	
GEO 308	Problems & Decisions in Environmental Geology	
GEO 309	Surface & Groundwater Hydrology	
GEO 450	Applied Geographic Information Systems	

### Major Requirements <sup>3</sup>

BIO 151 & 151L	Concepts of Biology I: Cell & Molecular Biology and Concepts of Biology Laboratory: Cell & Molecular Biology	4
BIO 152 & 152L	Concepts of Biology II: Evolution & Ecology and Concepts of Biology Laboratory II: Evolution & Ecology	4
BIO 299	Biology Seminar	1
BIO 310 & 310L	Ecology and Ecology Laboratory	4
BIO 312	General Genetics	3
BIO 420	Seminar (Satisfies CAP Major Capstone)	1
BIO 459	Environmental Ecology	3
BIO 479L	Environmental Instrumentation Laboratory	2
BIO 499	Environmental Biology Internship	3
Select three field oriented courses from: <sup>3, 4</sup>		11
BIO 301	Evolution	
BIO 311	Introductory Entomology	
BIO 312L	Genetics Laboratory	
BIO 320 & 320L	Marine Biology and Marine Biology Laboratory	
BIO 340 & 340L	Culture, Biodiversity & Resources Management and Culture, Biodiversity & Resources Management Laboratory	

BIO 359	Sustainability & the Biosphere
BIO 360 & 360L	Island Environmental Biology and Island Environmental Biology Laboratory
BIO 370	Conservation Biology
BIO 402 & 402L	Vertebrate Zoology and Vertebrate Zoology Laboratory
BIO 407 & 407L	Plant Diversity & Ecology and Plant Diversity & Ecology Laboratory
BIO 409 & 409L	Ecological Restoration and Ecological Restoration Laboratory
BIO 421	Biological Problems <sup>6</sup>
BIO 439	Analysis & Interpretation of Biological Data
BIO 441	Environmental Plant Biology
BIO 450 & 450L	Comparative Animal Physiology and Comparative Animal Physiology Laboratory
BIO 452 & 452L	Biology of Rivers & Lakes and Biology of Rivers & Lakes Laboratory
BIO 459L	Environmental Ecology Laboratory
BIO 465	Disease Ecology
BIO 489	Mycology

Select three laboratory oriented courses from: <sup>3, 5</sup> 10

BIO 309 & 309L	Comparative Anatomy of the Vertebrates and Comparative Anatomy Laboratory
BIO 311	Introductory Entomology
BIO 312L	Genetics Laboratory
BIO 314 & 314L	Plant Biology and Plant Biology Laboratory
BIO 402 & 402L	Vertebrate Zoology and Vertebrate Zoology Laboratory
BIO 403 & 403L	Physiology I and Physiology Laboratory I
BIO 411 & 411L	General Microbiology and General Microbiology Laboratory
BIO 415	Neurobiology
BIO 421	Biological Problems <sup>6</sup>
BIO 435 & 435L	Microbial Ecology and Microbial Ecology Laboratory
BIO 439	Analysis & Interpretation of Biological Data
BIO 440 & 440L	Cell Biology and Cell Biology Laboratory
BIO 441	Environmental Plant Biology
BIO 442 & 442L	Developmental Biology and Developmental Biology Laboratory
BIO 445	Evolution & Development
BIO 450 & 450L	Comparative Animal Physiology and Comparative Animal Physiology Laboratory
BIO 460	Introduction to Bioinformatics
BIO 461 & 461L	Invertebrate Zoology and Invertebrate Zoology Laboratory
BIO 462	Molecular Biology
BIO 465	Disease Ecology
BIO 470	Cancer Biology
BIO 475 & 475L	Human Anatomy and Human Anatomy Laboratory

BIO 480 & 480L	Principles of Microscopy and Principles of Microscopy Laboratory
BIO 489	Mycology

### Breadth

ASI 150	Introduction to the University Experience	1
Social and Behavioral Sciences (PSY 101 satisfies CAP Social Science)		6
ANT 150 or PSY 101	Cultural Anthropology or Introductory Psychology	
Elective		
Total Hours to total at least		120

- 1 MTH 168 - MTH 169 by placement.
- 2 Other appropriate statistics courses may be substituted with the approval of the department chairperson.
- 3 A minimum grade of C- is required.
- 4 At least two courses with accompanying laboratory. One non-BIO science course approved for science majors may be included in this section with permission. BIO 499 requires the permission of the EVB Program Director.
- 5 At least one course with accompanying laboratory. One non-BIO science course approved for science majors may be included in this section with permission. BIO 499 requires the permission of the EVB Program Director.
- 6 By permission only. Qualifies only as a laboratory elective.

## Minor in Biology (bio)

### Biology

BIO 151 & 151L	Concepts of Biology I: Cell & Molecular Biology and Concepts of Biology Laboratory: Cell & Molecular Biology	4
BIO 152 & 152L	Concepts of Biology II: Evolution & Ecology and Concepts of Biology Laboratory II: Evolution & Ecology	4
BIO 310	Ecology	3
BIO 312	General Genetics	3
Select two BIO courses (300/400 level)		6
Total Hours		20

- Bachelor of Science, Biology (p. 129)
- Bachelor of Science, Environmental Biology (p. 131)

## Biology

### First Year

Fall	Hours Spring	Hours
ASI 150	1 BIO 152 & 152L	4
BIO 151 & 151L (satisfies CAP natural science)	4 CHM 124 & 124L	4
CHM 123 & 123L (satisfies CAP natural science)	4 MTH 149	3

MTH 148 (satisfies CAP mathematics)	3 REL 103, PHL 103, or HST 103 (satisfies CAP humanities)	3	ENG 100 (satisfies CAP Writing Seminar)	3 HST 103, PHL 103, or REL 103 (satisfies CAP Humanities)	3
ENG 100 (satisfies CAP writing seminar)	3 REL 103, PHL 103, or HST 103	3	HST 103, PHL 103, or REL 103 (satisfies CAP Humanities)		3
REL 103, PHL 103, or HST 103 (satisfies CAP humanities)	3				
	<b>18</b>	<b>17</b>		<b>16</b>	<b>17</b>
<b>Second Year</b>			<b>Second Year</b>		
<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>	<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
BIO 299	1 BIO 310	3	BIO 310 & 310L	4 BIO 299	1
BIO 312	3 CHM 314 & 314L	4	CHM 313 & 313L	4 BIO 312	3
CHM 313 & 313L	4 PHY 202 & 202L	4	PHY 201 & 201L	4 CHM 314 & 314L	4
PHY 201 & 201L	4 CMM 100 (satisfies CAP writing seminar)	3	ANT 150 or PSY 101	3 PHY 202 & 202L	4
ENG 200	3 Social Science (CAP)	3	ENG 200	3 Social Science (CAP)	3
	<b>15</b>	<b>17</b>		CMM 100 (satisfies CAP Communication)	3
<b>Third Year</b>				<b>18</b>	<b>18</b>
<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>	<b>Third Year</b>	<b>Hours Spring</b>	<b>Hours</b>
BIO Elective Biomed	3 BIO 420	1	<b>Fall</b>	3 BIO Lab-Oriented Elective w/Lab	4
BIO Elective Env/Eco w/lab	4 BIO Elective Env/Eco	3	BIO 459		
Adv HST	3 BIO Elective Biomed w/lab	4	BIO Field Elective w/Lab	4 BIO 420	1
Adv PHL/REL (PEA/FT)	3 Inquiry	3	GEO 115 & 115L	4 GEO 116 & 116L	4
Arts	3 Integrative Social Science	3	MTH 367	3 Adv PHL/REL (PEA/FT)	3
	<b>16</b>	<b>17</b>	Arts	3 Adv HST	3
<b>Fourth Year</b>				<b>17</b>	<b>15</b>
<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>	<b>Fourth Year</b>	<b>Hours Spring</b>	<b>Hours</b>
BIO Elective w/lab	4 BIO 499	3	<b>Fall</b>	2 BIO 499	3
BIO Elective	3 BIO Field Elective	3	BIO 479L	4 BIO Field Elective	3
Diversity and Social Justice	3 BIO Lab Elective	3	BIO Field Elective w/Lab	3 BIO Lab-Oriented Elective	3
Adv PHL/REL (PEA/FT)	3 Diversity and Social Justice	3	BIO Lab-Oriented Elective	3-4 Diversity and Social Justice	3
General Elective (optional)	3 Integrative	3	GEO 307, 308, 309, or 450	3 Integrative	3
	<b>16</b>	<b>15</b>	adv PHL/REL (PEA/FT)	3	
			Inquiry		
				<b>18-19</b>	<b>15</b>

Total credit hours: 131

## Environmental Biology

### First Year

<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
ASI 150	1 BIO 152 & 152L	4
BIO 151 & 151L (satisfies CAP Natural Science)	4 CHM 124 & 124L	4
CHM 123L & 123L (satisfies CPA Natural Science)	2 MTH 149	3
MTH 148 (satisfies CAP Mathematics)	3 HST 103, PHL 103, or REL 103 (satisfies CAP Humanities)	3

Total credit hours: 134-135

## Courses

### BIO 101. General Biology I. 3 Hours

Study of the more important biological processes and principles through analysis and synthesis, dealing primarily with the organizational aspects of living things. For the nonscience major.

### BIO 101L. General Biology Laboratory I. 1 Hour

Examination of biological concepts using basic biological techniques and stressing an investigational and experimental approach. One two-hour laboratory per week. Corequisite(s): BIO 101.

### BIO 151. Concepts of Biology I: Cell & Molecular Biology. 3 Hours

Study of the molecular and cellular organization of organisms. Topics also include development and genetics. Core biology course.



**BIO 151L. Concepts of Biology Laboratory: Cell & Molecular Biology. 1 Hour**

An introduction to biological laboratory procedures and instrumentation through a series of observational and experimental exercises at the cellular and molecular level. Core biology course. Corequisite(s): BIO 151.

**BIO 152. Concepts of Biology II: Evolution & Ecology. 3 Hours**

Study of evolution and ecology. Topics include phylogeny, systematics, and conservation. Core biology course. BIO 151 recommended.

**BIO 152L. Concepts of Biology Laboratory II: Evolution & Ecology. 1 Hour**

An introduction to biological laboratory exercises at the organismal and the system level through a series of observational and experimental exercises in evolution, ecology and behavioral ecology. Core biology course. Corequisite(s): BIO 152.

**BIO 299. Biology Seminar. 1 Hour**

Introduction to biological journals and abstracting materials. Practice in reviewing, abstracting, and presenting biological information, and career development. Core biology course. Biology and environmental biology majors only. Prerequisite(s): BIO 152.

**BIO 301. Evolution. 3 Hours**

Theory and evidence of organic evolution, with emphasis on microevolutionary change and population genetics. Prerequisite(s): BIO 152.

**BIO 309. Comparative Anatomy of the Vertebrates. 3 Hours**

Study of changes that have occurred in the vertebrate body with the passage of time, and analysis of their significance. Prerequisite(s): BIO 152.

**BIO 309L. Comparative Anatomy Laboratory. 1 Hour**

Dissection and study of the anatomical structure of representative vertebrate animals. One three-hour laboratory per week. Corequisite(s): BIO 309.

**BIO 310. Ecology. 3 Hours**

Interrelationship of plants, animals, and micro-organisms with the physical-chemical environment: nutrient cycles, energy flow, ecosystems, and factors affecting distribution and abundance of organisms. Core biology course. Prerequisite(s): BIO 152.

**BIO 310L. Ecology Laboratory. 1 Hour**

Measurement of population, community, and environmental variables in terrestrial and aquatic systems. The lab is field-based using local ecological resources. One three-hour laboratory per week and weekend field trips. Corequisite(s): BIO 310.

**BIO 311. Introductory Entomology. 3 Hours**

Classification, physiology, ecology, and impact of insects on society. Prerequisite(s): BIO 152.

**BIO 312. General Genetics. 3 Hours**

Study of the principles of variation and heredity covering both Mendelian and molecular genetics. Core biology course. Prerequisite(s): BIO 152.

**BIO 312H. General Genetics. 3 Hours**

Study of the principles of variation and heredity covering both Mendelian and molecular genetics. Core biology course. Prerequisite(s): BIO 152.

**BIO 312L. Genetics Laboratory. 1 Hour**

Exploration of heredity using molecular genetic methods. One three-hour laboratory per week. Corequisite(s): BIO 312.

**BIO 314. Plant Biology. 3 Hours**

Consideration of structure, function, reproduction, and inheritance as applicable in the plant patterns of life. Emphasis on the vascular plants. Prerequisite(s): BIO 152.

**BIO 314L. Plant Biology Laboratory. 1 Hour**

Emphasis on generalized structure and function of plants. One three-hour laboratory per week. Corequisite(s): BIO 314.

**BIO 320. Marine Biology. 2 Hours**

Introduction to the diversity of marine life including the physical-chemical environment. Prerequisite(s): Permission of instructor. . Corequisite(s): BIO 320L.

**BIO 320L. Marine Biology Laboratory. 2 Hours**

Examination of marine organisms and processes. Laboratory work conducted on UD campus and at off-campus field sites in the southern United States or Hawaii. Prerequisite(s): Permission of instructor. Corequisite(s): BIO 320.

**BIO 330. Animal Behavior. 3 Hours**

An evolutionary approach to the study of animal behavior, emphasizing both proximate mechanisms and functional explanations of the survival value of behavior. Prerequisite(s): BIO 152.

**BIO 330L. Animal Behavior Laboratory. 1 Hour**

Analysis of animal behavior using various animal models. One three-hour laboratory per week and occasional Saturday field trips. Corequisite(s): BIO 330.

**BIO 340. Culture, Biodiversity & Resources Management. 3 Hours**

Field lecture course addressing cultural impacts on biodiversity and conciliatory demands for resource management to preserve the integrity of unique global environments. An experiential study of culture, regional geological morphology and weather-patterns, economic development, the freshwater-marine continuum, resource utilization, environmental law and management on conservation of unique biological habitats and organisms. Prerequisite(s): Permission of instructor. Corequisite(s): BIO 340L.

**BIO 340L. Culture, Biodiversity & Resources Management Laboratory. 1 Hour**

Lab field course on culture, biodiversity and balanced resource management to preserve integrity of unique global environments and compromises with economic development. Assessment of biodiversity in diverse biomes (e.g. elevational and rainforest-desert gradients, watersheds, coral reef systems) will be assessed with experimental design, data collection and analysis. May fulfill only one laboratory requirement for the Biology major. Prerequisite(s): Permission of instructor. Corequisite(s): BIO 340.

**BIO 350. Applied Microbiology. 3 Hours**

Fundamentals of applied and environmental microbiology for environmental scientists and engineers. Introduction to microorganisms and their role in bioenvironmental engineering and industrial processes. No science credit for biology majors. Prerequisite(s): BIO 152; CHM 314.

**BIO 350L. Applied Microbiology Laboratory. 1 Hour**

An introductory laboratory to acquaint students with basic microbiology laboratory techniques as applied to environmental pollution and industrial fermentations. One three-hour laboratory per week. Corequisite(s): BIO 350.

**BIO 359. Sustainability & the Biosphere. 3 Hours**

Study of the principles of sustainability. All areas of sustainability will be covered with emphasis on ecological facets of sustainability. Discussion of loss of habitat and biodiversity in the context of sustaining natural resources for future generations. Prerequisite(s): BIO 152 or SCI 230.

**BIO 359H. Sustainability & the Biosphere. 3 Hours**

Study of the principles of sustainability. All areas of sustainability will be covered with emphasis on ecological facets of sustainability. Discussion of loss of habitat and biodiversity in the context of sustaining natural resources for future generations. Prerequisite(s): BIO 152 or SCI 230.

**BIO 360. Island Environmental Biology. 3 Hours**

Field lecture course on environments of Pacific Islands. Study of volcanic geology, island morphology/weather-patterns, native culture, economic development, freshwater-marine continuum and water resource utilization on unique biological habitats. Prerequisite(s): Permission of instructor. Corequisite(s): BIO 360L.

**BIO 360L. Island Environmental Biology Laboratory. 1-2 Hours**

Lab field course on Pacific Islands. Ecology of elevational and rainforest-desert gradients, volcanic mountain streams, watersheds, and coral systems with experimental design, data collection and analysis. Prerequisite(s): Permission of instructor. Corequisite(s): BIO 360.

**BIO 370. Conservation Biology. 3 Hours**

An ecosystem approach to the study of and threat to local, regional, and global biodiversity. Application of ecological principles of conservation of species and habitats. Prerequisite(s): BIO 152.

**BIO 395. Global Environmental Biology. 3 Hours**

Presentation of the biological and ecological principles needed for critical discussion and evaluation of current global environmental issues including food production, human population growth, role of humans and pollution in environmental degradation, and conservation of agricultural, forest and other natural resources. No science credit for biology majors. Prerequisite(s): BIO 101 or SCI 190.

**BIO 402. Vertebrate Zoology. 3 Hours**

The morphology, physiology, ecology, and distribution of representative vertebrate groups. Prerequisite(s): BIO 310 or BIO 312.

**BIO 402L. Vertebrate Zoology Laboratory. 1 Hour**

Laboratory focused on the diversity, systematics and ecology of vertebrates. One three-hour laboratory per week. Corequisite(s): BIO 402.

**BIO 403. Physiology I. 3 Hours**

Physical-chemical examination of the physiological events occurring in a living system with emphasis on physiology of the cell, excretion, nerves, muscles, bone, blood, heart, circulation, and respiration. Prerequisite(s): BIO 152; CHM 314.

**BIO 403H. Physiology I. 3 Hours**

Physical-chemical examination of the physiological events occurring in a living system with emphasis on physiology of the cell, excretion, nerves, muscles, bone, blood, heart, circulation, and respiration. Prerequisite(s): BIO 152; CHM 314.

**BIO 403L. Physiology Laboratory I. 1 Hour**

Systematic approach to the acquisition and interpretation of information about the physiology of living systems. One three-hour laboratory per week. Corequisite(s): BIO 403.

**BIO 404. Physiology II. 3 Hours**

Integrated systems based examination of physiological processes in humans with a special emphasis on molecular mechanisms of pathophysiological conditions in humans and experimental animal systems. Prerequisite(s): BIO 403.

**BIO 407. Plant Diversity & Ecology. 3 Hours**

Lecture course addressing plant diversity and ecology. Course includes an overview of plant systematics and aspects of plant anatomy, population ecology, community ecology, ecosystem ecology, and global ecology. Prerequisite(s): BIO 310.

**BIO 407L. Plant Diversity & Ecology Laboratory. 1 Hour**

Field laboratory course addressing plant diversity and ecology. Includes a series of field labs focused on plant identification, followed by labs focused on quantitatively assessing plants, plant communities, and ecosystems. Labs will take place in a variety of natural areas. Corequisite(s): BIO 407.

**BIO 409. Ecological Restoration. 3 Hours**

Principles and practices of ecological restoration. The course presents the rationale and knowledge needed to understand, appreciate, plan and perform ecological restoration. Prerequisite(s): BIO 310.

**BIO 409L. Ecological Restoration Laboratory. 1 Hour**

Practical applications of the principles of ecological restoration to a variety of ecosystems. One three-hour laboratory per week. Corequisite(s): BIO 409.

**BIO 411. General Microbiology. 3 Hours**

Introductory course stressing the physiology, cultivation, and classification of microbial organisms; their role in medicine, agriculture, and industry. Prerequisite(s): BIO 152; CHM 313.

**BIO 411L. General Microbiology Laboratory. 1 Hour**

Lab exercises focusing on the basic techniques involved in the isolation and identification of bacteria, including assessment of biochemical activities, growth characteristics of bacteria, and the impact of the environment on microbial growth. One three-hour laboratory per week. Corequisite(s): BIO 411.

**BIO 412. Genetics Human Diseases. 3 Hours**

Study of the molecular genetics of inherited human diseases using a systems approach. Survey of inherited diseases linked to major organs and organ systems. Prerequisite(s): BIO 312; CHM 313.

**BIO 415. Neurobiology. 3 Hours**

Structure and function of the brain and nervous system. Emphasis on understanding cellular and molecular events within the nervous system using model organisms. Prerequisite(s): BIO 152; CHM 124.

**BIO 420. Seminar. 1 Hour**

Practice in development, presentation, and discussion of papers dealing with biological research problems, and career development. Core biology course. Prerequisite(s): BIO 299, BIO 310, BIO 312.

**BIO 421. Biological Problems. 1-2 Hours**

Laboratory research problems. Topics arranged with faculty advisors. Prerequisite(s): (BIO 310 or BIO 312); Permission of department chairperson.

**BIO 422. Biological Problems. 1-2 Hours**

Library research problems. Topics arranged with faculty advisors. Prerequisite(s): (BIO 310 or BIO 312); Permission of department chairperson.

**BIO 425. Parasitology. 3 Hours**

Introduction to the morphology, life history, and clinical significance of parasites and other symbionts. Prerequisite(s): BIO 310 or BIO 312.

**BIO 425L. Parasitology Laboratory. 1 Hour**

Recognition of common human parasites. Study of both living and preserved forms. One three-hour laboratory per week. Corequisite(s): BIO 425.

**BIO 427. Immunology. 3 Hours**

Discussions of antigens, antibodies, antigenicity, immunogenicity, and antigen-antibody reactions including hypersensitivity, immune tolerance, and transplants. Prerequisite(s): (BIO 403 or BIO 411 or BIO 440 or BIO 442) or CHM 420.

**BIO 435. Microbial Ecology. 3 Hours**

Study of the diversity and activity of microorganisms and the interrelationships between microorganisms and their environments with emphasis on aquatic ecosystems. Prerequisite(s): BIO 411; CHM 314.

**BIO 435L. Microbial Ecology Laboratory. 1 Hour**

Examination of the methods of isolation and enumeration of microorganisms and techniques for determining their activities in the field and laboratory. One three-hour laboratory per week. Corequisite(s): BIO 435.

**BIO 439. Analysis & Interpretation of Biological Data. 3 Hours**

Introducing the nature of some of the important types of data that are generated in biological research, the databases that warehouse such data, the principles involved in the analysis of such data, the use of appropriate software to analyze such data, and the biological interpretation of the results of analysis. Prerequisite(s): BIO 152.

**BIO 440. Cell Biology. 3 Hours**

Study of the function, structure, composition, heredity, and growth of cells. Analysis of cell concepts in biochemical terms. Prerequisite(s): BIO 152; CHM 314.

**BIO 440L. Cell Biology Laboratory. 1 Hour**

Experimental approaches to explore modern concepts in cell structure, function, and biology. One three-hour laboratory per week. Corequisite(s): BIO 440.

**BIO 441. Environmental Plant Biology. 3 Hours**

Study of the physiological basis for environmental effects on plant metabolism, structure, growth and development, including plant responses to elevated carbon dioxide, acid deposition, and water stress. Prerequisite(s): BIO 310 or BIO 312.

**BIO 442. Developmental Biology. 3 Hours**

Study of animal development, including morphological patterns of development, mechanisms of cellular differentiation, cell-cell interactions during development, and mechanisms of differential gene expression. Emphasis on understanding development at the cellular and molecular levels. Prerequisite(s): BIO 152; CHM 314.

**BIO 442L. Developmental Biology Laboratory. 1 Hour**

Exploration of the development of key model organisms from the morphological and molecular perspectives with an emphasis on basic developmental laboratory techniques. One three-hour laboratory per week. Corequisite(s): BIO 442.

**BIO 444. Plant Diversity. 3 Hours**

Broad survey of the major divisions of the plant kingdom; consideration of algae, fungi, bryophytes, vascular plant groups; includes generalized life histories, ecological and physiological characteristics, and evolutionary relationships. Prerequisite(s): BIO 310.

**BIO 444L. Plant Diversity Laboratory. 1 Hour**

Laboratory studies of the plant groups, including life cycles and evolutionary, physiological, and ecological adaptations. One three-hour laboratory per week. Corequisite(s): BIO 444.

**BIO 445. Evolution & Development. 3 Hours**

Molecular and population genetic examination of the evolution of animal form. Topics include comparative developmental biology, population genetics, and molecular evolution. Prerequisite(s): BIO 312.

**BIO 450. Comparative Animal Physiology. 3 Hours**

Organized on a function-system basis, course dealing with environment-organism interaction and with integrative systems of the principle phyla of animals. Prerequisite(s): (BIO 310 or BIO 312); CHM 124.

**BIO 450L. Comparative Animal Physiology Laboratory. 1 Hour**

Examination of physiological responses to the physical environment. Variations of the physical environment are examined in the field. Study of animals under controlled laboratory conditions with experimental design, data collection and analysis to assess physiological adaptations. One three-hour laboratory or field trip per week. Corequisite(s): BIO 450.

**BIO 452. Biology of Rivers & Lakes. 3 Hours**

The biological interrelationships of organisms in rivers, streams, lakes and ponds including biodiversity, ecological/evolutionary adaptations and structure of aquatic ecosystems. Prerequisite(s): BIO 310.

**BIO 452L. Biology of Rivers & Lakes Laboratory. 1 Hour**

Laboratory and field exercises emphasizing the biological, chemical and physical attributes of freshwater ecological systems. One three-hour laboratory or field trip per week. Corequisite(s): BIO 452.

**BIO 459. Environmental Ecology. 3 Hours**

The application of current ecological knowledge and principles toward the study of human impact on the environment. Emphasis on ecosystem dynamics, applied ecology, disturbance ecology, and approaches to solving global environmental problems. Prerequisite(s): BIO 310.

**BIO 459H. Environmental Ecology. 3 Hours**

The application of current ecological knowledge and principles toward the study of human impact on the environment. Emphasis on ecosystem dynamics, applied ecology, disturbance ecology, and approaches to solving global environmental problems. Prerequisite(s): BIO 310.

**BIO 459L. Environmental Ecology Laboratory. 1 Hour**

Analytical approach to studying applied ecology and human impact on the environment. Emphasis on laboratory and field approaches to solving environmental problems through the use of ecological principles. One three-hour laboratory per week. Corequisite(s): BIO 459.

**BIO 460. Introduction to Bioinformatics. 3 Hours**

This course introduces the concepts involved in bioinformatics, using the appropriate material from the disciplines of biology, chemistry and computer science, among others. Prerequisite(s): BIO 152.

**BIO 461. Invertebrate Zoology. 3 Hours**

Survey of the structure, activities, life histories, and relationships of the invertebrate animals, with some emphasis on their origin and development. Prerequisite(s): BIO 310 or BIO 312.

**BIO 461L. Invertebrate Zoology Laboratory. 1 Hour**

Examination of the structure and function of the major invertebrate phyla. Survey of representative animals with an emphasis on observational skills for analysis of the structural adaptations of live animals. One three-hour laboratory per week. Corequisite(s): BIO 461.

**BIO 462. Molecular Biology. 3 Hours**

Analysis of the nature of the gene and gene action. Particular attention to genetic regulation and to recent advances in molecular genetics. Prerequisite(s): BIO 312; CHM 314.

**BIO 465. Disease Ecology. 3 Hours**

Examination of ecological factors affecting the emergence and dynamics of infectious diseases of humans and wildlife. History and overview of how diseases are often a product of populations, communities, ecosystems, and global systems. Includes an introduction to epidemiology and current molecular and geographic information system techniques used to study these integrated systems. Prerequisite(s): (BIO 310, BIO 411) or permission of department chairperson or instructor.

**BIO 466. Biology of Infectious Disease. 3 Hours**

The nature of infectious diseases, host-parasite relationships in resistance and infection, defense mechanism (antigen-antibody response); survey of the bacteria causing disease in humans. Prerequisite(s): BIO 411.

**BIO 470. Cancer Biology. 3 Hours**

Study of growth patterns and causes of cancer at the cellular and molecular levels. Discussion of the hereditary and environmental factors that contribute to the development of the disease in cancer patients. Description of the research being conducted to understand and cure the disease. Prerequisite(s): BIO 403 or BIO 440.

**BIO 475. Human Anatomy. 3 Hours**

Study of the fundamental principles of human gross anatomy with emphasis on all organ systems. Prerequisite(s): BIO 152; CHM 314.

**BIO 475L. Human Anatomy Laboratory. 1 Hour**

Study of human gross anatomy emphasizing all organs systems using computer-assisted dissection, anatomical human models and occasional dissection of nonhuman cadaver organs. One three-hour laboratory per week. Corequisite(s): BIO 475.

**BIO 477H. Honors Thesis. 3 Hours**

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

**BIO 478H. Honors Thesis. 3 Hours**

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

**BIO 479L. Environmental Instrumentation Laboratory. 2 Hours**

The understanding and use of field- and laboratory-based equipment to study current environmental issues. Emphasis on team-centered approaches to investigating environmental problems. Same as GEO 479L. One five-hour laboratory or field trip per week. Prerequisite(s): BIO 310; GEO 116.

**BIO 480. Principles of Microscopy. 3 Hours**

Focus on basic principles and theory of light and electron microscopy, and how these techniques address fundamental questions in science. Prerequisite(s): BIO 152.

**BIO 480L. Principles of Microscopy Laboratory. 1 Hour**

Application and practice of light and electron microscopy. One three-hour laboratory per week. Corequisite(s): BIO 480.

**BIO 489. Mycology. 3 Hours**

Introductory course stressing the interrelationship between fungi and the rest of the biological world. Emphasis on the basic biology and ecology of fungi, decomposition, species interactions, plant pathology and medical mycology. Prerequisite(s): BIO 152.

**BIO 496. Special Topics in Biology. 1-3 Hours**

Lecture course addressing advanced topics in biology. Topics are variable depending on faculty teaching the course and the course aims. Students should consult the class schedule. May be repeated. Prerequisite(s): BIO 151, BIO 152.

**BIO 499. Environmental Biology Internship. 3 Hours**

Majors will have the opportunity to obtain valuable training and experience under the mentorship of established scientists and professionals. Emphasis on approaches to solving environmental problems including such research areas as bioremediation, risk assessment, and ecological restoration. May be repeated up to six semester hours. No science credit for biology majors. Prerequisite(s): Permission of Environmental Biology Program Coordinator.

## Chemistry

Majors:

- Bachelor of Arts, Chemistry (p. 138)
- Bachelor of Science, Biochemistry (p. 139)
- Bachelor of Science, Chemistry (p. 140)
- Bachelor of Science, Medicinal-Pharmaceutical Chemistry (p. 141)

Minor:

- Chemistry (p. 142)

The B.S. in Chemistry (BS-CHM) program is approved by the American Chemical Society for the training of professional chemists, and provides students with the opportunity to perform an original research project under the direction of a faculty mentor. BS-CHM majors electing to perform research typically select their faculty mentor and project during the first term of their junior year. The research project may be conducted over the entire senior year, but is more commonly conducted over a ten-week period during the summer following the junior year. In either case, the project culminates in the senior year with enrollment in , the submission of an acceptable thesis, and the presentation of a seminar in CHM 497. Additional research work to a maximum total of six semester hours may be elected provided the work extends beyond two semesters.

The B.S. in Biochemistry (BCM) program prepares students for careers in the biochemical and life sciences. BCM majors may elect to conduct an original research project in biochemistry or a related chemical sub-discipline. In all other respects these biochemically-related research projects are identical to those detailed for the BS-CHM program above.

The B.S. in Medicinal-Pharmaceutical Chemistry (MCM) program is designed for students pursuing careers in medicine, pharmacy or forensic chemistry, and provides a focused preparation in the analysis and synthesis of compounds of pharmacological significance. MCM majors may elect to conduct an original research project, typically in synthetic or analytical chemistry. In all other respects these research projects are identical to those detailed for the BS-CHM program above.

The B.A. in chemistry (BA-CHM) program prepares students for a wide range of interdisciplinary professions, and consists of a curriculum in which the traditional B.S. curriculum has been modified, most notably in mathematics, physics, and advanced chemistry. The BA-CHM program



is accordingly somewhat flexible, and affords students a wide selection of courses in the humanities and social sciences. BA-CHM majors are free to choose courses which prepare them for careers in medicine, dentistry, optometry, veterinary medicine, biochemistry, education, law, and other professions which require a science background.

A minor in chemistry consists of twenty semester hours. Typically these consist of 8 credit hours of general chemistry (CHM123, 123L, 124, 124L), 8 credit hours of organic chemistry (CHM313, 313L, 314, 314L), 3 credit hours of physical chemistry (CHM302, 303, or 304), and one credit hour in basic molecular spectroscopy (CHM317). Of these, the physical chemistry course is the only requirement.

### Faculty

David Johnson, Chairperson

Professors Emeriti: Fratini, Keil, Knachel, Morrow, Singer

Professors: S. Swavey

Associate Professors: Benin, Church, Crosson, Johnson, Lopper, Masthay

Assistant Professors: Erb, Kovacs, Mammana

Visiting Assistant Professor: Turner

Lecturer: Trick

Lab Instructors: Eckerle, Hils, Piegrass, R. Swavey

## Bachelor of Arts with a major in Chemistry (chm) Minimum 124 Hours

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
HST 103 West and the World	
REL 103 Introduction to Religious and Theological Studies	
PHL 103 Intro To Philosophy	
ENG 100 Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>	0-3
ENG 200 Writing Seminar II	
Oral Communication	3
CMM 100 Principles of Oral Communication	
Mathematics	3
Social Science	3
Arts	3
Natural Sciences <sup>4</sup>	7
Crossing Boundaries	variable credit
Faith Traditions	
Practical Ethical Action	
Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

- Completed with ASI 110 and ASI 120.
- Or ENG 100A and ENG 100B, or ENG 200H, by placement.
- Completed with ENG 200H or ASI 120.
- Must include two different disciplines and accompanying lab.

### Liberal Studies Curriculum

Creative and Performing Arts (May include CAP Arts)	3
L2 Proficiency (Proficiency in a language other than English)	0-11
Literature (May include CAP Components)	3
Mathematics (Satisfies CAP Mathematics)	9
MTH 148 & MTH 149 Introductory Calculus I and Introductory Calculus II	
MTH 367 Statistical Methods I	
Natural Sciences (Applies to CAP Natural Science)	8
PHY 201 & 201L General Physics and General Physics Laboratory	
PHY 202 & 202L General Physics and General Physics Laboratory	
Social Sciences (Includes CAP Social Science)	12

### Major Requirements <sup>1</sup>

(CHM 123 applies to CAP Natural Science)		36
CHM 123 & 123L General Chemistry and General Chemistry Laboratory	4	
CHM 124 & 124L General Chemistry and General Chemistry Laboratory	4	
CHM 201 & 201L Quantitative Analysis and Quantitative Analysis Laboratory	4	
CHM 302 or CHM 303 & CHM 304 Physical Chemistry and Physical Chemistry	3-6	
CHM 313 & 313L Organic Chemistry and Organic Chemistry Laboratory	4	
CHM 314 & 314L Organic Chemistry and Organic Chemistry Laboratory	4	
CHM 496 Professional Practices Seminar (Satisfies CAP Major Capstone)	0	
Select four courses from: <sup>2</sup>		10-13
CHM 317 Spectroscopic Identification of Organic Compounds		
CHM 341 Environmental Chemistry		
CHM 404 Special Topics in Physical Chemistry		
CHM 412 Intermediate Organic Chemistry		
CHM 415 Analytical Chemistry		
CHM 415L Analytical Chemistry Laboratory		
CHM 417 Inorganic Chemistry		
CHM 418L Inorganic Chemistry Laboratory		
CHM 420 Biochemistry		
CHM 426 Biosynthetic Organic Chemistry		
CHM 427 Medicinal Chemistry		
CHM 451 General Biochemistry I		
CHM 452 General Biochemistry II		
CHM 462L Biochemistry Laboratory		

CHM 477H	Honors Thesis	3
CHM 478H	Honors Thesis	3
CHM 497 & CHM 498	Research Seminar and Research & Thesis	
CHM 499	Research & Thesis	

**Breadth**

ASI 150	Introduction to the University Experience	1
Total Hours to total at least		124

<sup>1</sup> Advanced placement is permitted.

<sup>2</sup> May substitute two upper level courses from other science departments with permission of chairperson.

## Bachelor of Science with a major in Biochemistry (bcm) Minimum 120 Hours

**Common Academic Program (CAP)**

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>		12
HST 103	West and the World	
REL 103	Introduction to Religious and Theological Studies	
PHL 103	Intro To Philosophy	
ENG 100	Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>		0-3
ENG 200	Writing Seminar II	
Oral Communication		3
CMM 100	Principles of Oral Communication	
Mathematics		3
Social Science		3
Arts		3
Natural Sciences <sup>4</sup>		7
Crossing Boundaries		variable credit
Faith Traditions		
Practical Ethical Action		
Inquiry		
Integrative		
Advanced Study		variable credit
Philosophy and/or Religious Studies		
Historical Studies		
Diversity and Social Justice		3
Major Capstone		0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

**Science Breadth Requirements**

CPS 132	Computer Programming for Engineering & Science	3
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MTH 168	Analytic Geometry & Calculus I (Satisfies CAP Mathematics)	4
MTH 169	Analytic Geometry & Calculus II	4
MTH 218	Analytic Geometry & Calculus III	4
PHY 206	General Physics I - Mechanics	3
PHY 207	General Physics II - Electricity & Magnetism	3
PHY 201L	General Physics Laboratory	1
Select courses from:		10
BIO 312	General Genetics	
BIO 314	Plant Biology	
BIO 403	Physiology I	
BIO 404	Physiology II	
BIO 411	General Microbiology	
BIO 427	Immunology	
BIO 440	Cell Biology	
BIO 462	Molecular Biology	
BIO 466	Biology of Infectious Disease	
CHM 404	Special Topics in Physical Chemistry	
CHM 412	Intermediate Organic Chemistry	
CHM 415 & 415L	Analytical Chemistry and Analytical Chemistry Laboratory	
CHM 417	Inorganic Chemistry	
CHM 418L	Inorganic Chemistry Laboratory	
CHM 426	Biosynthetic Organic Chemistry	
CHM 427	Medicinal Chemistry	
CHM 497 & CHM 498	Research Seminar and Research & Thesis	
CHM 499	Research & Thesis	

**Major Requirements <sup>1</sup>** 45

Satisfies CAP Natural Science

Year 1

BIO 151 & 151L	Concepts of Biology I: Cell & Molecular Biology and Concepts of Biology Laboratory: Cell & Molecular Biology	4
BIO 152	Concepts of Biology II: Evolution & Ecology	3
CHM 123 & 123L	General Chemistry and General Chemistry Laboratory	4
CHM 124 & 124L	General Chemistry and General Chemistry Laboratory	4

Year 2

CHM 201 & 201L	Quantitative Analysis and Quantitative Analysis Laboratory	4
CHM 313 & 313L	Organic Chemistry and Organic Chemistry Laboratory	4
CHM 314 & 314L	Organic Chemistry and Organic Chemistry Laboratory	4
BIO Elective and Laboratory		4

Year 3

CHM 303 & 303L	Physical Chemistry and Physical Chemistry Laboratory	4
CHM 304	Physical Chemistry	3
CHM 451	General Biochemistry I	3
CHM 452	General Biochemistry II	3

CHM 462L	Biochemistry Laboratory	1
CHM 495	Introduction to Research Seminar	0
Year 4		
CHM 496	Professional Practices Seminar (Satisfies CAP Major Capstone)	0

**Breadth**

ASI 150	Introduction to the University Experience	1
Foreign Language		6-8
Social and Behavioral Sciences (Includes CAP Social Science)		6
Total Hours to total at least		120

<sup>1</sup> Advanced placement is permitted.

## Bachelor of Science with a major in Chemistry (chm) Minimum 120 Hours

**Common Academic Program (CAP)**

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
HST 103 West and the World	
REL 103 Introduction to Religious and Theological Studies	
PHL 103 Intro To Philosophy	
ENG 100 Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>	0-3
ENG 200 Writing Seminar II	
Oral Communication	3
CMM 100 Principles of Oral Communication	
Mathematics	3
Social Science	3
Arts	3
Natural Sciences <sup>4</sup>	7
Crossing Boundaries	variable credit
Faith Traditions	
Practical Ethical Action	
Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

**Science Breadth Requirements**

Mathematics, Computer Sciences <sup>1</sup>	15
CPS 132 Computer Programming for Engineering & Science	

MTH 168	Analytic Geometry & Calculus I (Satisfies CAP Mathematics)	
MTH 169	Analytic Geometry & Calculus II	
MTH 218	Analytic Geometry & Calculus III	
PHY 206	General Physics I - Mechanics (Applies to CAP Natural Science)	3
PHY 207	General Physics II - Electricity & Magnetism	3
PHY 208	General Physics III - Mechanics of Waves	3
PHY 210L	General Physics Laboratory	1
PHY 211L	General Physics Laboratory II	1

**Major Requirements <sup>2</sup>** 49

Year 1		
CHM 123 & 123L	General Chemistry and General Chemistry Laboratory (Applies to CAP Natural Science)	4
CHM 124 & 124L	General Chemistry and General Chemistry Laboratory	4
Year 2		
CHM 201 & 201L	Quantitative Analysis and Quantitative Analysis Laboratory	4
CHM 313 & 313L	Organic Chemistry and Organic Chemistry Laboratory	4
CHM 314 & 314L	Organic Chemistry and Organic Chemistry Laboratory	4
Year 3		
CHM 303 & 303L	Physical Chemistry and Physical Chemistry Laboratory	4
CHM 304 & 304L	Physical Chemistry and Physical Chemistry Laboratory	4
CHM 317	Spectroscopic Identification of Organic Compounds	1
CHM 417	Inorganic Chemistry	3
CHM 418L	Inorganic Chemistry Laboratory	1
CHM 495	Introduction to Research Seminar	0
Year 4		
CHM 415 & 415L	Analytical Chemistry and Analytical Chemistry Laboratory	4
CHM 420	Biochemistry	3
or CHM 451 & CHM 452	General Biochemistry I and General Biochemistry II	
CHM 496	Professional Practices Seminar (Satisfies CAP Major Capstone)	0
Select three courses from: <sup>3</sup>		9
CHM 404	Special Topics in Physical Chemistry	
CHM 412	Intermediate Organic Chemistry	
CHM 426	Biosynthetic Organic Chemistry	
CHM 427	Medicinal Chemistry	
CHM 462L	Biochemistry Laboratory	
CHM 477H	Honors Thesis	3
CHM 478H	Honors Thesis	3
CHM 497 & CHM 498	Research Seminar and Research & Thesis	
CHM 499	Research & Thesis	

**Breadth**

ASI 150	Introduction to the University Experience	1
Foreign Language		6-8
Social and Behavioral Sciences (Includes CAP Social Science)		6
Total Hours to total at least		120

<sup>1</sup> Should be completed during the first two years.

<sup>2</sup> Advanced placement is permitted.

<sup>3</sup> May substitute one approved science course from another department.

## Bachelor of Science in Medicinal-Pharmaceutical Chemistry (mcm) Minimum 120 hours

**Common Academic Program (CAP)**

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
HST 103 West and the World	
REL 103 Introduction to Religious and Theological Studies	
PHL 103 Intro To Philosophy	
ENG 100 Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>	0-3
ENG 200 Writing Seminar II	
Oral Communication	3
CMM 100 Principles of Oral Communication	
Mathematics	3
Social Science	3
Arts	3
Natural Sciences <sup>4</sup>	7
Crossing Boundaries	variable credit
Faith Traditions	
Practical Ethical Action	
Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

**Science Breadth Requirements**

Satisfies CAP Mathematics and CAP Natural Science

BIO 151 & 151L	Concepts of Biology I: Cell & Molecular Biology and Concepts of Biology Laboratory: Cell & Molecular Biology	4
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BIO 152 & 152L	Concepts of Biology II: Evolution & Ecology and Concepts of Biology Laboratory II: Evolution & Ecology	4
MTH 148 & MTH 149	Introductory Calculus I and Introductory Calculus II	6
MTH 367	Statistical Methods I	3
PHY 201 & 201L	General Physics and General Physics Laboratory	4
PHY 202 & 202L	General Physics and General Physics Laboratory	4

**Major Requirements <sup>2, 3</sup>** 53

Year 1		
CHM 123 & 123L	General Chemistry and General Chemistry Laboratory	4
CHM 124 & 124L	General Chemistry and General Chemistry Laboratory	4
Year 2		
CHM 201 & 201L	Quantitative Analysis and Quantitative Analysis Laboratory	4
CHM 313 & 313L	Organic Chemistry and Organic Chemistry Laboratory	4
CHM 314 & 314L	Organic Chemistry and Organic Chemistry Laboratory	4
Year 3		
CHM 302 & 302L	Physical Chemistry and Physical Chemistry Laboratory <sup>1</sup>	4
CHM 317	Spectroscopic Identification of Organic Compounds	1
CHM 420	Biochemistry <sup>4</sup>	3
CHM 462L	Biochemistry Laboratory	1
CHM 495	Introduction to Research Seminar	0
Year 4		
CHM 319L	Advanced Organic Synthesis Laboratory	1
CHM 426	Biosynthetic Organic Chemistry	3
CHM 427	Medicinal Chemistry	3
CHM 454	Rational Drug Design	3
CHM 463L	Bioanalytical Chemistry Laboratory	1
CHM 496	Professional Practices Seminar (Satisfies CAP Major Capstone)	0

**Science Requirements** 13

Select six semester hours from: <sup>5</sup>

CHM 412	Intermediate Organic Chemistry	
CHM 415 & 415L	Analytical Chemistry and Analytical Chemistry Laboratory	
CHM 417	Inorganic Chemistry	
CHM 418L	Inorganic Chemistry Laboratory	
CHM 497 & CHM 498	Research Seminar and Research & Thesis	

Select two lecture courses and one laboratory from:

BIO 403 & 403L	Physiology I and Physiology Laboratory I	
BIO 411 & 411L	General Microbiology and General Microbiology Laboratory	



BIO 440 & 440L	Cell Biology and Cell Biology Laboratory	
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**Breadth**<sup>6</sup>

ASI 150	Introduction to the University Experience	1
Social and Behavioral Sciences (Includes CAP Social Science)		6
Total Hours to total at least		120

- Substitution of more advanced courses is possible upon consultation with the Department of Chemistry chairperson.
- Consult General Requirements for all Bachelor of Science programs and the Common Academic Program requirements.
- Advanced placement is permitted.
- Biochemistry courses CHM 451 and CHM 452 may be substituted, with CHM 452 counting as a general elective.
- Chemistry graduate courses or advanced electives from other departments may be selected with the permission of the Department of Chemistry chairperson.
- If composition requirement is waived, the student should seek the English elective. Advanced writing courses are recommended.

**Minor in Chemistry (chm)****Chemistry**

CHM 123 & 123L	General Chemistry and General Chemistry Laboratory	4
CHM 124 & 124L	General Chemistry and General Chemistry Laboratory	4
CHM 302 or CHM 303	Physical Chemistry Physical Chemistry	3
Select three CHM courses (300/400 level)		9

- In consultation with the chairperson.

- Bachelor of Arts, Chemistry (p. 138)
- Bachelor of Science, Medicinal-Pharmaceutical Chemistry (p. 142)
- Bachelor of Science, Biochemistry (p. 143)
- Bachelor of Science, Chemistry (p. 140)

**Bachelor of Arts, Chemistry****First Year**

Fall	Hours Spring	Hours
ASI 150	1 CHM 124 & 124L	4
CHM 123 & 123L	4 MTH 149	3
MTH 148	3 REL 103, PHL 103, or HST 103 (satisfies CAP Humanities)	3
ENG 100 (satisfies CAP Writing Seminar)	3 Language	4
REL 103, PHL 103, or HST 103 (satisfies CAP Humanities)	3 Social Science (CAP)	3
REL 103, PHL 103, or HST 103	3	
	<b>17</b>	<b>17</b>

**Second Year**

Fall	Hours Spring	Hours
CHM 313 & 313L	4 CHM 201 & 201L	4
MTH 367	3 CHM 314 & 314L	4
ENG 200	3 CMM 100 (satisfies CAP Communication)	3
Language	4 Language	3
Social Science	3 Literature	3
	<b>17</b>	<b>17</b>

**Third Year**

Fall	Hours Spring	Hours
CHM 302	3 PHY 202	3
PHY 201 & 201L	4 PHY 202L	1
CHM elective	3 CHM elective	3
Social Science (upper level)	3 Social Science	3
Adv HST	3 Arts	3
	Adv PHL/REL (PEA/FT)	3
	<b>16</b>	<b>16</b>

**Fourth Year**

Fall	Hours Spring	Hours
CHM 496 (capstone)	0 CHM elective	3
CHM elective	3 Integrative	3
Adv PHL/REL (PEA/FT)	3 Diversity and Social Justice	3
Inquiry	3 General Elective (optional)	3
General Elective	3 General Elective (optional)	3
General Elective	3	
	<b>15</b>	<b>15</b>

Total credit hours: 130

**Bachelor of Science, Medicinal-Pharmaceutical Chemistry****First Year**

Fall	Hours Spring	Hours
ASI 150	1 CHM 124 & 124L	4
CHM 123 & 123L	4 BIO 152 & 152L	4
BIO 151 & 151L	4 MTH 149	3
MTH 148	3 REL 103, PHL 103, or HST 103 (satisfies CAP Humanities)	3
ENG 100 (satisfies CAP Writing Seminar)	3 REL 103, PHL 103, or HST 103 (satisfies CAP Humanities)	3
	<b>15</b>	<b>17</b>

**Second Year**

Fall	Hours Spring	Hours
CHM 201 & 201L	4 PHY 202 & 202L	4

CHM 313 & 313L	4 MTH 367	3	REL 103, PHL 103, or HST 103	3 CMM 100	3
PHY 201 & 201L	4 CHM 314 & 314L	4		BIO elective w/lab	4
REL 103, PHL 103, or HST 103 (satisfies CAP Humanities)	3 ENG 200 (satisfies CAP Communication)	3	<b>Third Year</b>	<b>15</b>	<b>17</b>
Social Science	3 CMM 100 (satisfies CAP Humanities)	3	<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
<b>18</b>	<b>17</b>		CHM 303 & 303L	4 CHM 304	3
<b>Third Year</b>			CHM 451	3 CHM 452 & CHM 462L	4
<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>	PHY 206 & PHY 210L	4 CHM 495	0
CHM 302 & CHM 303L	4 CHM 420 & CHM 462L	4	Foreign Language	4 PHY 207	3
CHM 317	1 CHM 495	0	Arts	3 Foreign language	4
CHM elective	3 CHM elective	3		Social Science (CAP)	3
BIO elective and lab	4 BIO elective	3	<b>18</b>	<b>17</b>	
Adv HST	3 Arts	3	<b>Fourth Year</b>		
	Social Science (CAP)	3	<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
<b>15</b>	<b>16</b>		CHM 496 (capstone)	0 CHM 497	0
<b>Fourth Year</b>			BIO/CHM elective w/lab	4 BIO/CHM elective	3
<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>	BIO/CHM elective	3 Adv PHL/REL (PEA/FT)	3
CHM 426	3 CHM 454	3	Adv PHL/REL (PEA/FT)	3 Integrative	3
CHM 319L	1 CHM 463L	1	Social Science	3 Adv HST	3
CHM 427	3 Adv PHL/REL (PEA/FT)	3	Inquiry	3 Diversity and Social Justice	3
CHM 496 (capstone)	0 Integrative	3	<b>16</b>	<b>15</b>	
Adv PHL/REL (PEA/FT)	3 Diversity and Social Justice	3	Total credit hours: 131		
Inquiry	3 General Elective (Optional)	3	<b>Bachelor of Science, Chemistry</b>		
General Elective (optional)	3		<b>First Year</b>		
<b>16</b>	<b>16</b>		<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>

Total credit hours: 130

## Bachelor of Science, Biochemistry

<b>First Year</b>			<b>First Year</b>		
<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>	<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
ASI 150	1 CHM 124 & 124L	4	ASI 150	1 CHM 124 & 124L	4
CHM 123 & 123L	4 MTH 169	4	CHM 123 & 123L	4 MTH 169	4
MTH 168	4 REL 103, PHL 103, or HST 103 (satisfies CAP Humanities)	3	MTH 168	4 CMM 100	3
ENG 100 (satisfies CAP Writing Seminar)	3 REL 103, PHL 103, or HST 103	3	ENG 100	3 REL 103, PHL 103, or HST 103	3
BIO 151 & 151L	4 BIO 152	3	REL 103, PHL 103, or HST 103	3 Foreign Language	4
<b>16</b>	<b>17</b>		REL 103, PHL 103, or HST 103	3	
<b>Second Year</b>			<b>18</b>	<b>18</b>	
<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>	<b>Second Year</b>		
CHM 201 & 201L	4 CHM 314 & 314L	4	<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
CHM 313 & 313L	4 CPS 132	3	CHM 201 & 201L	4 CHM 314 & 314L	4
MTH 218	4 ENG 200	3	CHM 313 & 313L	4 CPS 132	3
			MTH 218	4 PHY 206 & PHY 210L	4
			Foreign Language	4 ENG 200	3
				Adv PHL/REL (PEA/FT)	3
			<b>16</b>	<b>17</b>	

**Third Year**

Fall	Hours Spring	Hours
CHM 303 & 303L	4 CHM 304 & 304L	4
PHY 207 & PHY 211L	4 CHM 317	1
CHM elective	3 CHM 417 & CHM 418L	4
Arts	3 CHM 495	0
Social Science (CAP)	3 Social Science Adv HST	3 3
	<b>17</b>	<b>15</b>

**Fourth Year**

Fall	Hours Spring	Hours
CHM 496	0 CHM 420	3
CHM 415 & 415L	4 CHM 497	0
CHM elective	3 CHM elective	3
Adv PHL/REL (PEA/FT)	3 Integrative	3
Inquiry	3 Diversity and Social Justice	3
General Elective (optional)	3 General Elective (Optional)	3
	<b>16</b>	<b>15</b>

Total credit hours: 132

**Courses****CHM 115. College Preparatory Chemistry. 3 Hours**

One-term course for students desiring to enter a science or engineering program but whose background is insufficient for CHM 123 and CHM 124. Unacceptable for credit toward chemistry requirements in any chemistry program.

**CHM 115L. College Preparatory Chemistry Laboratory. 1 Hour**

Course to accompany CHM 115 or to be elected by students in CHM 200 who lack previous chemistry laboratory experience. One three-hour laboratory each week.

**CHM 123. General Chemistry. 3 Hours**

Comprehensive treatment of the fundamentals of general chemistry. Prerequisite(s): One year of high school chemistry or equivalent.

**CHM 123L. General Chemistry Laboratory. 1 Hour**

Laboratory course to complement CHM 123. One three-hour laboratory session each week. Corequisite(s): CHM 123.

**CHM 124. General Chemistry. 3 Hours**

Comprehensive treatment of the fundamentals of general chemistry. Prerequisite(s): CHM 123.

**CHM 124L. General Chemistry Laboratory. 1 Hour**

Laboratory course to complement CHM 124. One three-hour laboratory session each week. Prerequisite(s): CHM 123L Corequisite(s): CHM 124.

**CHM 200. Chemistry & Society. 3 Hours**

Course for nonscience majors. The application of chemical principles to the examination of issues such as environmental quality, disease, hunger, synthetic materials, and law enforcement. Depending upon background and experience, a student needing a laboratory course may enroll in either CHM 115L or CHM 123L. Prerequisite(s): One year of high school chemistry or equivalent.

**CHM 201. Quantitative Analysis. 3 Hours**

Application of the principles of chemical equilibrium to the theory and techniques of gravimetric, volumetric, spectrophotometric, and electroanalytical methods of chemical analysis. Prerequisite(s): CHM 124, CHM 124L.

**CHM 201L. Quantitative Analysis Laboratory. 1 Hour**

Course to accompany CHM 201. One three-hour laboratory period each week.

**CHM 234. Energy Resources. 3 Hours**

The chemical and geological aspects of formation, production, and benefits/costs (including environmental impacts) of energy derived from fossil fuels (coal and hydrocarbons), biofuels (e.g., ethanol production), radioactive materials (nuclear power), and renewable sources (e.g., geothermal, hydro, wind, and solar power). Prerequisite(s): CHM 123, CHM 124. Corequisite(s): GEO 208.

**CHM 302. Physical Chemistry. 3 Hours**

Essential elements of thermodynamics, chemical kinetics, equilibria, and electrochemistry for those with a primary interest in the life sciences. For B.A. chemistry majors and premedical, pre dental, and biology majors. Prerequisite(s): CHM 124.

**CHM 302L. Physical Chemistry Laboratory. 1 Hour**

Course to accompany CHM 302. One three-hour laboratory each week. Prerequisite(s): CHM 201, CHM 201L. Corequisite(s): CHM 302.

**CHM 303. Physical Chemistry. 3 Hours**

Fundamentals of thermodynamics, chemical kinetics, electrochemistry, and spectroscopy with a mathematics format. For B.S. chemistry and biochemistry majors and chemical engineers. Prerequisite(s): CHM 201 or equivalent. Corequisite(s): MTH 218.

**CHM 303L. Physical Chemistry Laboratory. 1 Hour**

Course to accompany CHM 303. One three-hour laboratory each week. Prerequisite(s): MTH 218.

**CHM 304. Physical Chemistry. 3 Hours**

Fundamentals of thermodynamics, chemical kinetics, electrochemistry, and spectroscopy with a mathematics format. For B.S. chemistry and biochemistry majors and chemical engineers.

**CHM 304L. Physical Chemistry Laboratory. 1 Hour**

Course to accompany CHM 304. One three-hour laboratory each week. Corequisite(s): MTH 218.

**CHM 313. Organic Chemistry. 3 Hours**

Major topics in organic chemistry including synthesis, mechanisms, stereochemistry, and spectroscopy. Required of all chemistry majors and students in the life sciences. Prerequisite(s): CHM 124.

**CHM 313L. Organic Chemistry Laboratory. 1 Hour**

Common separation, purification, and analytical techniques including chromatography and spectroscopy. One three-hour laboratory each week. Corequisite(s): CHM 313.

**CHM 314. Organic Chemistry. 3 Hours**

Major topics in organic chemistry including synthesis, mechanisms, stereochemistry, and spectroscopy. Required of all chemistry majors and students in the life sciences. Prerequisite(s): CHM 313.

**CHM 314L. Organic Chemistry Laboratory. 1 Hour**

Synthesis and characterization of organic materials utilizing skills from CHM 313L. One three-hour laboratory each week. Prerequisite(s): CHM 313L. Corequisite(s): CHM 314.

**CHM 317. Spectroscopic Identification of Organic Compounds. 1 Hour**

The use of nuclear magnetic resonance, infrared, and mass spectrometry in elucidating structures. Emphasis on interpretation and integration of spectral data in problem solving. Prerequisite(s): (CHM 314, CHM 314L) or equivalent.

**CHM 319L. Advanced Organic Synthesis Laboratory. 1 Hour**

Preparation of organic compounds by single and multi-step synthetic sequences. Basic techniques in synthesis including use of organometallics, inert atmosphere, temperature control, extraction, vacuum distillation, column chromatography, recrystallization, and spectroscopic characterization methods. One four-hour laboratory each week. Prerequisite(s): CHM 314, CHM 314L.

**CHM 341. Environmental Chemistry. 3 Hours**

An introduction to the chemical processes in the environment. Topics include chemical equilibrium in aqueous solution, reaction mechanisms as applied to atmospheric chemistry, and analytical methods commonly applied to environmental samples. Prerequisite(s): CHM 314 or permission of instructor.

**CHM 341H. Environmental Chemistry. 3 Hours**

An introduction to the chemical processes in the environment. Topics include chemical equilibrium in aqueous solution, reaction mechanisms as applied to atmospheric chemistry, and analytical methods commonly applied to environmental samples. Prerequisite(s): CHM 314 or permission of instructor.

**CHM 341L. Environmental Chemistry Laboratory. 1 Hour**

Laboratory course to accompany CHM 341. Corequisite(s): CHM 341.

**CHM 404. Special Topics in Physical Chemistry. 3 Hours**

Thorough treatment of topics such as electrochemistry, macromolecules, photochemistry, or spectroscopy. May be repeated as topics change. Prerequisite(s): CHM 302 or CHM 303.

**CHM 412. Intermediate Organic Chemistry. 3 Hours**

Modern theory and practice of organic chemistry. May include structure-reactivity relationships, reaction mechanism, and synthetic topics not normally treated in introductory courses. Prerequisite(s): CHM 302 or equivalent; CHM 313, CHM 314; senior standing.

**CHM 415. Analytical Chemistry. 2 Hours**

Chemical analysis based on modern instrumentation. Chromatographic, electrochemical, and spectroscopic methods. Prerequisite(s): CHM 201, CHM 201L; (CHM 302 or CHM 304).

**CHM 415L. Analytical Chemistry Laboratory. 2 Hours**

Course to accompany CHM 415. Two three-hour laboratory sessions each week. Prerequisite(s): CHM 201L; CHM 302 or equivalent.

**CHM 417. Inorganic Chemistry. 3 Hours**

An advanced course in modern inorganic chemistry. Atomic structure, principles of bonding and structure, acid-base chemistry, periodicity, coordination compounds, nonaqueous solvents, electrochemistry, molecular symmetry, organometallic compounds, and the chemistry of selected representative elements. Prerequisite(s): CHM 314. Corequisite(s): CHM 302 or CHM 304.

**CHM 418L. Inorganic Chemistry Laboratory. 1 Hour**

Laboratory course dealing with the synthesis and characterization of inorganic and organometallic compounds. Topics include vacuum and inert atmosphere techniques, separation and purification, spectroscopic characterization, X-ray diffraction, magnetic moment, and conductance measurements. Prerequisite(s): CHM 201L, CHM 314L. Corequisite(s): CHM 417.

**CHM 420. Biochemistry. 3 Hours**

The fundamental aspects of the chemistry and biochemistry of carbohydrates, lipids, proteins, and nucleic acids. Enzymology, protein purification, bioenergetics, metabolism of carbohydrates, lipids, amino acids, nucleotides and nucleic acids, elementary molecular biology, and control processes are described. Acceptable preparation for medical school. Prerequisite(s): CHM 314.

**CHM 426. Biosynthetic Organic Chemistry. 3 Hours**

Mechanistic fundamentals of the biosynthesis and transformation of organic natural products, with special emphasis on medicinal compounds, toxins, pheromones and other secondary metabolite structures. Prerequisite(s): (CHM 314, CHM 314L) or equivalent.

**CHM 427. Medicinal Chemistry. 3 Hours**

The chemical mechanisms of action of the major drug classes will be surveyed with particular emphasis on the facets of organic chemistry that control drug-receptor interactions, metabolism and mechanisms of toxicity and resistance. First term. Prerequisite(s): CHM 314; (CHM 420 or CHM 451).

**CHM 450. Advanced Organic Synthesis. 3 Hours**

Fundamentals of synthesis and transformations of organic compounds, with emphasis on mechanisms; pericyclic reactions; small and medium ring synthesis; chemoselectivity, regioselectivity, stereoselectivity, retrosynthesis, functional group transformations, carbon-carbon bond forming reactions, oxidations, reductions and protecting groups. Prerequisite: (CHM 314, CHM 314L) or equivalent.

**CHM 451. General Biochemistry I. 3 Hours**

Discussion of the chemistry and biochemistry of carbohydrates, amino acids, proteins, and nucleic acids, including health-science and methodologic aspects. Descriptions of enzymology, protein purification, and carbohydrate metabolism related to such topics as bioenergetics, membranes, and disease processes. Recommended for students desiring entry into graduate and professional schools. Prerequisite(s): CHM 201, CHM 314.

**CHM 452. General Biochemistry II. 3 Hours**

Discussion of selected topics in bioenergetics, and metabolism of lipids, amino acids, porphyrins, nucleic acids, and proteins. Current aspects of nutrition, biochemical genetics, endocrinology, regulation, and genetic engineering addressed and related to health-science topics as time permits. Suitable preparation for medical school. Prerequisite(s): CHM 451.

**CHM 454. Rational Drug Design. 3 Hours**

Introduction to drug target selection, lead compound discovery, and application of structure-activity relationships and computational chemistry towards refinement and optimization of lead compounds and their derivatives. Use of molecular graphics software and publicly available macromolecular structure databases will provide the foundation for evaluating macromolecular models of drug targets and allow a hands-on exploration of the structure/function relationships of proteins that have been successful targets of rational drug design. Prerequisite(s): (CHM 420 or CHM 452) or equivalent.



**CHM 454H. Rational Drug Design. 3 Hours**

Introduction to drug target selection, lead compound discovery, and application of structure-activity relationships and computational chemistry towards refinement and optimization of lead compounds and their derivatives. Use of molecular graphics software and publicly available macromolecular structure databases will provide the foundation for evaluating macromolecular models of drug targets and allow a hands-on exploration of the structure/function relationships of proteins that have been successful targets of rational drug design. Prerequisite(s): (CHM 420 or CHM 452) or equivalent.

**CHM 462L. Biochemistry Laboratory. 1 Hour**

Laboratory course to accompany biochemistry lecture courses. Spectrophotometry, pH and dissociation, enzymologic methodology and analytical techniques, chromatographic techniques. Corequisite(s): CHM 420 or CHM 451.

**CHM 463L. Bioanalytical Chemistry Laboratory. 1 Hour**

Introduction to analytical methods in current use in biochemistry. Course will focus on separations and spectroscopic methods for the analysis of biomolecules. Prerequisite(s): CHM 201, CHM 201L, CHM 302.

**CHM 477H. Honors Thesis. 3 Hours**

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

**CHM 478H. Honors Thesis. 3 Hours**

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

**CHM 490L. Scientific Glassblowing. 1 Hour**

Theory and practice of glass working. Under the supervision of a professional glassblower, students learn to make several standard seals and fabricate pieces of glass apparatus. Enrollment limited. One three-hour laboratory each week. Grading Option Two. Prerequisite(s): Permission of department chairperson.

**CHM 495. Introduction to Research Seminar. 0 Hours**

Research topics presented by visiting scientists and faculty, and the results of thesis research by senior students. Required of all junior chemistry and biochemistry majors in the B.S. programs. Grading Option two.

**CHM 496. Professional Practices Seminar. 0 Hours**

After discussions of the chemical literature and information retrieval, resumes, graduate education, and career opportunities, students present technical talks on topics with social, ethical, or historical implications. Required of all chemistry and biochemistry majors, both B.S. and B.A.

**CHM 497. Research Seminar. 0 Hours**

A series of seminars as described under CHM 495. Required of all senior chemistry and biochemistry majors in the B.S. programs.

**CHM 498. Research & Thesis. 3 Hours**

All students in the B.S. programs including co-op students are required to enroll for a minimum of three semester hours in a research course (CHM 498). Students may take additional research semester hours (CHM 499) if the work extends for more than two semesters. Successful completion of research courses requires the submission of a typewritten thesis and the presentation of a seminar. With the prior approval of the department chairperson, B.S. co-op students may substitute work experience for research. Prerequisite(s): Permission of department chairperson.

**CHM 499. Research & Thesis. 1-3 Hours**

All students in the B.S. programs including co-op students are required to enroll for a minimum of three semester hours in a research course (CHM 498). Students may take additional research semester hours (CHM 499) if the work extends for more than two semesters. Successful completion of research courses requires the submission of a typewritten thesis and the presentation of a seminar. With the prior approval of the department chairperson, B.S. co-op students may substitute work experience for research. Prerequisite(s): CHM 498; permission of department chairperson.

## Communication

- Bachelor of Arts, Communication (p. 147)

Concentrations:

- Communication Management
- Communication Studies
- Electronic Media
- Journalism
- Public Relations
- Theatre

Minors:

- Communication (p. 148)
- Political Journalism (p. 148)

The course requirement for communication majors is 39 semester hours. Teacher licensure through the dual-degree B.A. and B.S.E. program, conducted in conjunction with the Department of Teacher Education in the School of Education and Health Sciences, is an option for communication majors. Consult department chairperson for details.

A minor in communication consists of 15 semester hours. A minor in political journalism is available for political science majors. The political journalism minor consists of 18 semester hours. The department also offers a Bachelor of Arts with a major in theatre. See Theatre (p. 281).

### Faculty

Jonathan A. Hess, Chairperson

Professors Emeriti: Blatt, Gilvary, Harwood, Lain, Morlan

Professors: Cusella, Hess, Robinson, Skill, Thompson

Associate Professors: Anderson, Griffin, Han, Hayford, Scantlin, Wallace, Watters

Assistant Professors: Dunlevy, Langhorne, Taylor, Valenzano, Vibber

Lecturers: Angel, Combs, Dickson, Flynn, Oh, Walter

## Bachelor of Arts with a major in Communication (CMM) Minimum 124 Hours

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
HST 103 West and the World	
REL 103 Introduction to Religious and Theological Studies	
PHL 103 Intro To Philosophy	
ENG 100 Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>	0-3
ENG 200 Writing Seminar II	
Oral Communication	3
CMM 100 Principles of Oral Communication	
Mathematics	3
Social Science	3
Arts	3
Natural Sciences <sup>4</sup>	7
Crossing Boundaries	variable credit
Faith Traditions	
Practical Ethical Action	
Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

### Liberal Studies Curriculum

Creative and Performing Arts (May include CAP Arts)	3
L2 Proficiency (Proficiency in a language other than English)	0-11
Literature (May include CAP components)	3
Mathematics, excluding MTH 205 (Satisfies CAP Mathematics)	3
Natural Sciences (Satisfies CAP Natural Science)	11
Social Sciences (Includes CAP Social Science)	12

### Major Requirements

CMM 100 Principles of Oral Communication	3
CMM 201 Foundations of Mass Communication	3
CMM 202 Foundations of Communication Theories & Research	3
CMM 330 Media Writing	3

CMM 480 Communication Capstone Project & Presentation (Satisfies CAP Major Capstone)	3
Select two courses in CMM or THR <sup>3</sup>	6

### Select one concentration from:

#### Communication Management (CMT)

CMM 320 Interpersonal Communication	3
CMM 321 Small Group Communication	3
CMM 412 Statistical Methods in Communication	3
CMM 421 Communication in Organizations	3
Select two courses from:	6
CMM 322 Interviewing for Communication & Business	
CMM 351 Public Speaking	
CMM 352 Persuasion	
CMM 413 Communication in the Information Age	
CMM 420 Communication & Conflict Management	
CMM 498 Communication Internship	

#### Communication Studies (CSS)

Select six courses from CMM or THR <sup>2, 3</sup>	18
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#### Electronic Media (RTV)

CMM 430 Copyediting	3
CMM 343 Writing for Electronic and Digital Media	3
CMM 397 Communication Practicum <sup>4</sup>	1-3
Select one course from:	3
CMM 341 Audio Production	
CMM 342 Fundamentals of Video Production	
CMM 344 Multimedia Design & Production I	

Select two courses from:	6
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CMM 345 Classic American Film	
CMM 440 Broadcast News	
CMM 442 Advanced Television Production	
CMM 444 Multimedia Design & Production II	
CMM 446 Electronic Media Management	
CMM 449 Topics in Electronic Media	
CMM 498 Communication Internship	
CMS 414 Global Communication	

#### Journalism (JRN)

CMM 331 Feature Writing	3
CMM 430 Copyediting	3
CMM 431 Public Affairs Reporting	3
CMM 432 Media Law	3
Select two courses from:	6
CMM 332 Publication Design	
CMM 333 Free Lance Writing	
CMM 334 Sportswriting	
CMM 412 Statistical Methods in Communication	
CMM 416 Development of Mass Media	
CMM 439 Special Topics in Journalism	

CMM 498	Communication Internship	
CMS 414	Global Communication	

**Public Relations (PUB)**

CMM 360	Principles of Public Relations	3
CMM 412	Statistical Methods in Communication	3
CMM 460	Advanced Public Relations Writing	3
CMM 461	Public Relations Campaigns	3
Select two courses from:		6
CMM 331	Feature Writing	
CMM 332	Publication Design	
CMM 421	Communication in Organizations	
CMM 430	Copyediting	
CMM 469	Special Topics in Public Relations	
CMM 498	Communication Internship	

**Theatre (CTR)**

THR 203	Technical Production	3
THR 310	Acting I	3
THR 340	The Director in the Theatre	3
THR 415	History of the Theatre I	3
Select two courses from:		6
THR 305	Theatre Stagecraft	
THR 307	Theatre Lighting	
THR 323	Acting II	
THR 325	Theory & Criticism of the Stage I	
THR 326	Theory & Criticism of the Stage II	
THR 330	Concepts of Scene Design	
THR 424	Play Directing	

**Breadth**

ASI 150	Introduction to the University Experience	1
Supporting Area of Study <sup>5</sup>		12
Total Hours to total at least		124

<sup>1</sup> At least twenty-four of the required thirty-nine semester hours in all communication concentrations must be 300-400 level. No more than six total semester hours of CMM 390, CMM 397 and CMM 498 may be applied toward the thirty-nine semester hour requirement.

<sup>2</sup> Approved program of study by advisor and department chair must be submitted prior to completion of eighteen semester hours.

<sup>3</sup> Dance courses in the theatre program: THR 201, THR 251, THR 261, THR 271, THR 301, THR 351, THR 361, THR 371 do not count toward the thirty-nine semester hour requirement.

<sup>4</sup> Flyer TV or WUDR.

<sup>5</sup> Twelve semester hours from one discipline or approved minor or area of study: (at least six semester hours at the 300/400 level)

**Minor in Communication (CMM)****Communication**

CMM 100	Principles of Oral Communication	3
Select four CMM courses (300/400-level) <sup>1</sup>		12
Total Hours		15

<sup>1</sup> In consultation with the chairperson.

**Minor in Political Journalism (POJ)****Political Journalism <sup>1</sup>**

CMM 201	Foundations of Mass Communication	3
CMM 330	Media Writing	3
Select four courses from:		12
CMM 331	Feature Writing	
CMM 354	Political Campaign Communication	
CMM 355	Rhetoric of Social Movements	
CMM 431	Public Affairs Reporting	
CMM 432	Media Law	
Total Hours		18

<sup>1</sup> Available only to political science majors.

**First Year**

Fall	Hours Spring	Hours
ASI 150	1 CMM 330	3
CMM 100 (satisfies CAP communication)	3 ENG 100 (satisfies CAP writing seminar)	3
CMM 201	3 HST 103, PHL 103, or REL 103 (CAP humanities )	3
HST 103, PHL 103, or REL 103 (CAP humanities )	3 Language	4
HST 103, PHL 103, or REL 103 (CAP humanities )	3 MTH (CAP Mathematics)	3
Language	4	
	<b>17</b>	<b>16</b>

**Second Year**

Fall	Hours Spring	Hours
CMM 202	3 CMM Concentration	3
CMM Concentration	3 SSC 200 (satisfies CAP social science)	3
ENG 200	3 Arts (CAP) or Literature	3
INSS (CAP Natural Science)	4 INSS (CAP Natural Science)	4
Language	3 Social Science / Professional Studies	3
	<b>16</b>	<b>16</b>

**Third Year**

Fall	Hours Spring	Hours
CMM Concentration	3 CMM Concentration	3
CMM/CMS/THR Elective	3 CMM/CMS/THR Elective	3
Arts (CAP) or Literature	3 Social Science / Professional Studies	3
Social Science	3 Adv HST (Integrative)	3
INSS (CAP Inquiry)	3 Social Science	3
	<b>15</b>	<b>15</b>

**Fourth Year**

Fall	Hours Spring	Hours
CMM Concentration	3 CMM 480	3
CMM Concentration	3 Adv PHL/REL (PEA/FT)	3
Adv PHL/REL (PEA/FT)	3 Social Science / Professional Studies	3

Social Science	3 General Elective	2
Social Science / Professional Studies	3 Diversity and Social Justice	3
	<b>15</b>	<b>14</b>
Total credit hours: 124		

## Communication/Social Sciences Courses

### **CMS 316. Intercultural Communication. 3 Hours**

Study of interpersonal communication with emphasis on people from different countries and with different cultural backgrounds. Focus on the influence of culture on communication and language, verbal and non-verbal communication similarities and differences from culture to culture, and challenges of successful intercultural communication.

### **CMS 414. Global Communication. 3 Hours**

Introduction to the main topics in the field of global communication. Emphasis on comparative mass media and current issues in global communication. Will not satisfy humanities requirement.

### **CMS 415. Women & Communication. 3 Hours**

Seminar focusing on gender differences in communication, unique aspects to women's communication, and women's rhetoric. Current theory and research examined. Will not satisfy humanities requirement.

## Communication Courses

### **CMM 100. Principles of Oral Communication. 3 Hours**

Introduces the relationship between communication and democratic life in contemporary and historical contexts. This course examines the importance of communication in achieving mutual understanding and provides the opportunity to demonstrate effective and ethical dialogue. Students learn to structure messages that deliver complex information to non#experts, effectively advocate a position, and critique the messages of others.

### **CMM 100H. Principles of Oral Communication. 3 Hours**

Introduces the relationship between communication and democratic life in contemporary and historical contexts. This course examines the importance of communication in achieving mutual understanding and provides the opportunity to demonstrate effective and ethical dialogue. Students learn to structure messages that deliver complex information to non#experts, effectively advocate a position, and critique the messages of others.

### **CMM 110. Group Decision Making. 1 Hour**

Communication processes for small decision-making groups. Focus is on the development of general competencies in leadership, group roles, conflict management, agenda setting, problem analysis and research, decision making and critical thinking.

### **CMM 111. Informative Public Speaking. 1 Hour**

Communication processes for presenting information in a public speaking context. Focus is on the development of general competencies in development and organization of ideas, research, adaptation to an audience, use of PowerPoint, and delivery.

### **CMM 112. Persuasive Public Speaking. 1 Hour**

Communication processes for persuading listeners in a public speaking context. Focus is on the development of general competencies in the construction and organization of persuasive strategies, critical evaluation of arguments and evidence, research, adaptation to an audience, use of PowerPoint, and delivery.

### **CMM 113. Interviewing. 1 Hour**

Communication processes for information gathering and employment interviewing. Focus is on the development of general competencies in the conduct and organization of interviews, preparation of resumes, evaluation of questions and responses, research, listening, and nonverbal communication.

### **CMM 201. Foundations of Mass Communication. 3 Hours**

Historical development of mass media in America; survey of mass media theories, impact of mass media on people and society, the role and influence of the news media, new technologies, programming, and pressure groups.

### **CMM 202. Foundations of Communication Theories & Research. 3 Hours**

Study of the nature and scope of communication theories and research. Examination of how the communication discipline developed from classical traditions to its modern perspective.

### **CMM 311. Studies in Oral Performance. 3 Hours**

Oral performance of poetry, prose, and drama; combining study of vocal modulations, pitch, inflection, and tone color with intellectual and emotional analysis of selections as a means of making the literature alive and immediately present.

### **CMM 313. Nonverbal Communication. 3 Hours**

Survey of theory and research in nonverbal behavior. Examination of the influence of environmental factors, physical behavior, and vocal cues on human communication.

### **CMM 315. International Mass Media. 3 Hours**

Focus on the mass media of a particular foreign country or region of the world. Topics may include media content, use, societal effects and ownership.

### **CMM 320. Interpersonal Communication. 3 Hours**

Study of communication behavior in a variety of dyadic relationships including acquaintance, friendship, work, romantic, and family. Focus on communicative behavior and communicative processes in relationship development including building trust, managing conflict, negotiating power, and listening empathetically.

### **CMM 321. Small Group Communication. 3 Hours**

Examination of theory and research related to communicative processes in small, task-oriented groups. Applications include a focus upon decision-making strategies, leadership, conflict management, and cohesion. Prerequisite(s): CMM 110.

### **CMM 322. Interviewing for Communication & Business. 3 Hours**

Analysis of communication in structured dyadic interaction. Emphasis on the following types of interviews: information-gathering, employment, appraisal, and persuasive. Application through role-playing and feedback systems. Prerequisite(s): CMM 113.

### **CMM 330. Media Writing. 3 Hours**

Developing and practicing writing skills for journalism, public relations, and electronic media. Study and practice of ethics in determining news values, gathering information, and communicating clearly and accurately for mass audiences. AP style emphasized.

### **CMM 331. Feature Writing. 3 Hours**

Developing and writing nonfiction stories for newspapers and magazines. Story types include personality profile, color, background, consumer, and commentary. Study and practice in journalistic reporting skills and literary writing techniques. Emphasis on content, organization, style, and accuracy. Strong command of AP style necessary. Prerequisite(s): CMM 330.



**CMM 332. Publication Design. 3 Hours**

Layout and design of print and electronic publications, including newsletters, brochures, and web-based publications. Instruction in desktop and web publishing software, use of type and illustration, cost appraisal, printing methods.

**CMM 333. Free Lance Writing. 3 Hours**

Steps of free-lance publication, from market analysis to query letters to writing and rewriting. Mostly nonfiction, magazine markets, some newspaper and nonfiction book markets.

**CMM 334. Sportswriting. 3 Hours**

In addition to game stories, attention is also paid to writing about personalities, legal issues, and financial issues on the interscholastic, intercollegiate, amateur, and professional levels. Strong writing skills and knowledge of journalistic style expected. Prerequisite(s): CMM 330.

**CMM 340. Fundamentals of Broadcasting. 3 Hours**

Survey of broadcasting, with emphasis on television and radio networks, programming, regulation, audience measurement, audience effects, and technology. Although attention is given both to the origins and future of the field, contemporary broadcasting is emphasized.

**CMM 341. Audio Production. 3 Hours**

Study of the theories, processes, and technologies of audio production practices that can be applied in radio, television, and multimedia production. Exercises in recording of voice, music, and special effects. Course includes the operation of basic studio and field equipment, including analog and basic digital recording and editing.

**CMM 342. Fundamentals of Video Production. 3 Hours**

Explores the techniques of studio and remote video production. Includes the technical and creative aspects of planning and script preparation, producing, directing, technical directing, graphics, editing, camera, lighting, and sound for a variety of video programs.

**CMM 343. Scriptwriting for Electronic Media. 3 Hours**

Study of concrete approaches to and practice with the kinds of writing being done professionally in all program types on television and radio including corporate media writing. Prerequisite(s): CMM 330 or permission of instructor.

**CMM 344. Multimedia Design & Production I. 3 Hours**

Introduction to producing in the interactive media of CD-ROM and other digital formats. Reviews basic object linking and embedding in familiar computer programs such as Word, PowerPoint, and Freelance Graphics. Students build skills in multimedia authoring, using all the fundamental tools of graphics, text, audio, and video.

**CMM 345. Classic American Film. 3-6 Hours**

Topics course surveying the artistic evolution of American film. Includes the analysis of styles of producing, scripting, acting, directing, lighting, sound, cinematography, set design and editing through viewing of classic American films and selected international films that have influenced the art of American filmmaking. May be repeated once as topics change.

**CMM 350. Propaganda Analysis. 3 Hours**

Examination of major propaganda campaigns in history beginning with Greek democracy. Emphasis on twentieth century propaganda as psychological warfare. Principles of Aristotelean rhetorical theory applied to propaganda analysis.

**CMM 350H. Propaganda Analysis. 3 Hours**

Examination of major propaganda campaigns in history beginning with Greek democracy. Emphasis on twentieth century propaganda as psychological warfare. Principles of Aristotelean rhetorical theory applied to propaganda analysis.

**CMM 351. Public Speaking. 3 Hours**

Oral communication in professional situations. Adaptation of principles of effective speaking to specific audiences and occasions. Delivery of informational, problem-solving, and special-occasion speeches. Prerequisite(s): CMM 111 or CMM 112.

**CMM 351H. Public Speaking. 3 Hours**

Oral communication in professional situations. Adaptation of principles of effective speaking to specific audiences and occasions. Delivery of informational, problem-solving, and special-occasion speeches. Prerequisite(s): CMM 111 or CMM 112.

**CMM 352. Persuasion. 3 Hours**

Study of the use of communication to form attitudes. Examination of attitudes and social influence and their effects on human behavior. Topics include selected theories of persuasion, argument construction, and practical application.

**CMM 354. Political Campaign Communication. 3 Hours**

Examination of theory and research on the role, processes and effects of communication in political campaigns with emphasis on mass media, public speaking, debates, advertising, and interpersonal communications.

**CMM 355. Rhetoric of Social Movements. 3 Hours**

Study of rhetorical communication in American social movements through examination of the strategies, themes and tactics used by agitators and the institutional responses to discourse aimed at social change.

**CMM 360. Principles of Public Relations. 3 Hours**

Survey of the field of public relations emphasizing writing and public relations, theoretical implications of the field, the practitioner's role in organization and the community.

**CMM 390. Independent Study. 1-3 Hours**

Supervised study involving directed readings, individual research (library, field, or experimental), or projects in the specialized areas of communication. May be repeated for up to six semester hours. Prerequisite(s): Permission of department chairperson.

**CMM 397. Communication Practicum. 1-3 Hours**

Contracted participation in an approved on-campus communication organization. One semester hour per term to a maximum of three semester hours. Grading Option Two only.

**CMM 410. Family Communication. 3 Hours**

Study of the family from a communication perspective, considering the communication processes within the family and the extent to which communication affects and is affected by the family.

**CMM 411. Health Communication. 3 Hours**

Examination of communication theory and research as they relate to health care. Issues include reassurance, the role of the patient, interviews, health organizations, the media and health, compliance, providing explanations, and health care professions frequently neglected.

**CMM 412. Statistical Methods in Communication. 3 Hours**

Study of data gathering methods in communication. Practice in sampling, survey methods, questionnaire development, and experimental design. Emphasis on the use of logic to interpret data and to support claims.

**CMM 413. Communication in the Information Age. 3 Hours**

Examination of issues related to development, economics, programming, and the future of new mass communication technologies. Prerequisite(s): CMM 201 or permission of instructor.

**CMM 416. Development of Mass Media. 3 Hours**

History and analysis of the development and interdependence of mass media, print and electronic. Emphasis on its role in political and economic progress of U.S. and attendant responsibility.

**CMM 420. Communication & Conflict Management. 3 Hours**

Examination of the functions of communication in interpersonal conflict such as marital conflict, role conflict, and organizational conflict. Communicative strategies and tactics for managing conflict.

**CMM 421. Communication in Organizations. 3 Hours**

Analysis of message initiation, diffusion, and reception in organizations; analysis of the role of communication in developing productive work relationships, management practices, and organizational cultures.

**CMM 430. Copyediting. 3 Hours**

Editing, particularly news copy editing and headline writing. Emphasis on clear and concise wording; proper spelling, grammar, and punctuation; and accuracy. Strong command of AP style necessary. Prerequisite(s): CMM 330.

**CMM 431. Public Affairs Reporting. 3 Hours**

Investigative and specialized reporting on matters of public concern. Practice in gathering information from primary and secondary sources, and writing about complex subjects for mass audiences. Prerequisite(s): CMM 330.

**CMM 432. The Law & News Media. 3 Hours**

Exploration of the free press clause of the First Amendment, as defined by the courts and media practice. Study of First Amendment core values and theories. Investigation into law on libel, privacy, censorship, access to information, and copyright, as well as regulation of broadcast, cable and new electronic media. Prerequisite(s): Junior standing.

**CMM 439. Special Topics in Journalism. 3-6 Hours**

Concentrated study in special areas of journalism. May be repeated with change of topic.

**CMM 440. Broadcast News. 3 Hours**

Study of the process and practice of news gathering and writing for radio and television. Course includes research, analysis, writing and editing news and features, as well as legal and ethical concerns of broadcast news. Prerequisite(s): CMM 330, CMM 342.

**CMM 442. Advanced Television Production. 3 Hours**

Advanced techniques of both studio and electronic field production and post-production editing for television. Prerequisite(s): CMM 342.

**CMM 444. Multimedia Design & Production II. 3 Hours**

Advanced level multimedia production emphasizing client-based project generation through a design/production team approach. Focus is on interface design; project planning, script writing, story boarding; digital image, sound and video editing; and the use of authoring software. Prerequisite(s): CMM 344.

**CMM 446. Electronic Media Management. 3 Hours**

Survey of the leadership/management roles and responsibilities of broadcasting, cable television and corporate media enterprises. Prerequisite(s): CMM 340.

**CMM 449. Topics in Electronic Media. 3 Hours**

Concentrated study in special areas of electronic media production, criticism, and management. May be repeated once with change of topic. Depending on topic, prerequisites may be imposed.

**CMM 452. Public Discourse & Criticism. 3 Hours**

Examination of the foundations of the field of communication. Major focus on the development of rhetorical theory with attention to rhetorical analysis and criticism.

**CMM 460. Public Relations Writing. 3 Hours**

Study, development and application of public relations strategies. Emphasis on strategically effective, factually accurate and grammatically sound written communications for organizational and mass audiences. Prerequisite(s): CMM 330, CMM 360.

**CMM 461. Public Relations Campaigns. 3 Hours**

Students plan and carry out a public relations program for an established professional organization, work out solutions to communication and public relations problems, and prepare written campaign materials and handbooks. Prerequisite(s): CMM 330, CMM 360, CMM 460; senior standing.

**CMM 469. Special Topics in Public Relations. 3 Hours**

A concentrated study in specific areas of public relations. Development of specialized projects. May be repeated once with change of topics. Prerequisite(s): CMM 360 or permission of instructor.

**CMM 477H. Honors Thesis. 3 Hours**

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

**CMM 478H. Honors Thesis. 3 Hours**

Second of two courses leading to the selection, design, investigation and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

**CMM 480. Communication Capstone Project & Presentation. 3 Hours**

Project and presentation in the scholarship, activity and/or practice related to the major concentration. Students will present their work in a forum appropriate to their concentration.

**CMM 498. Communication Internship. 1-6 Hours**

Communication work experience in an approved organization. Student must be in good academic standing. Students are normally limited to a maximum of three semester hours. Under exceptional circumstances, students may petition the department chair for an additional three semester hours if the second internship is at a different organization and the student can demonstrate that the position offers a unique and significant educational opportunity not available through the first internship. Grading Option Two only. Prerequisite(s): CMM 110, (CMM 111 or CMM 112), CMM 113, CMM 201, CMM 202, CMM 330; permission of department chairperson.

**CMM 499. Special Topics in Communication. 3-6 Hours**

Concentrated study in specific areas of speech communication. May be repeated once with change of topic.

## Computer Science

Majors:

- Bachelor of Science, Computer Information Systems (p. 152)
- Bachelor of Science, Computer Science (p. 153)

#### Minors:

- Computer Information Systems (p. 154)
- Computer Science (p. 154)

The Department of Computer Science offers two programs leading to a Bachelor of Science degree in either computer science or computer information systems. Both programs require similar introductory core sequence of courses in computer science. The main differences between the two programs are in the mathematics and science requirements and in the application emphases.

### Computer Science

Computer science is the study of algorithms and their implementation as applications (apps). This includes the study of data structures, software design, programming languages, operating systems, and computer architecture. Each student must take appropriate upper-level electives from any subject areas of ambient intelligence, 3-D modeling, and game development; cyber security and computer networks; theory of computation; software engineering and project management; and big data and cloud computing.

### Computer Information Systems

This program emphasizes computer science concepts with particular attention to systems analysis and design, and includes a concentration area or minor chosen by the student in consultation with the student's advisor.

Both of these B.S. programs provide a foundation for students to embark on successful careers in a variety of computing disciplines, including software engineering, system design, database management, big data, ambient intelligence, gaming, cyber security, computer networking, systems programming and systems administration. In addition, graduates will be prepared to pursue graduate study in computer science and related disciplines.

Computer Science and Computer Information Systems majors are required to attain grades of C- or better in the following courses: CPS 150, CPS 151 and CPS 350.

A minor in computer science consists of 20 semester hours. A minor in computer information systems consists of twenty-three semester hours.

### Faculty

Mehdi Zargham, Chairperson  
 Professors Emeriti: Kester, Lang, Smith, Winslow  
 Professor: Sritharan, Zargham  
 Associate Professors: Buckley, Courte, Gowda, Perugini  
 Assistant Professor: Shen, Yao  
 Lecturer: Bashias, Sanyal

## Bachelor of Science with a major in Computer Information Systems (cis) Minimum 120 Hours

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
HST 103	West and the World

REL 103	Introduction to Religious and Theological Studies	
PHL 103	Intro To Philosophy	
ENG 100	Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>		0-3
ENG 200	Writing Seminar II	
Oral Communication		3
CMM 100	Principles of Oral Communication	
Mathematics		3
Social Science		3
Arts		3
Natural Sciences <sup>4</sup>		7
Crossing Boundaries		variable credit
Faith Traditions		
Practical Ethical Action		
Inquiry		
Integrative		
Advanced Study		variable credit
Philosophy and/or Religious Studies		
Historical Studies		
Diversity and Social Justice		3
Major Capstone		0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

### Science Breadth Requirements

Mathematics <sup>1</sup>	9
MTH 148	Introductory Calculus I (Satisfies CAP Mathematics)
MTH 149	Introductory Calculus II
MTH 367	Statistical Methods I

Natural Sciences (Applies to CAP Natural Science) <sup>1</sup> 8

Select two sequences from:

BIO 151 & 151L	Concepts of Biology I: Cell & Molecular Biology and Concepts of Biology Laboratory: Cell & Molecular Biology
BIO 152 & 152L	Concepts of Biology II: Evolution & Ecology and Concepts of Biology Laboratory II: Evolution & Ecology
CHM 123 & 123L	General Chemistry and General Chemistry Laboratory
CHM 124 & 124L	General Chemistry and General Chemistry Laboratory
GEO 115 & 115L	Physical Geology and Physical Geology Laboratory
GEO 116 & 116L	Geological History of the Earth and Geological History of the Earth Laboratory
PHY 201 & 201L	General Physics and General Physics Laboratory

PHY 202 & 202L	General Physics and General Physics Laboratory	
PHY 206 & PHY 210L	General Physics I - Mechanics and General Physics Laboratory	
PHY 207 & PHY 211L	General Physics II - Electricity & Magnetism and General Physics Laboratory II	
<b>Major Requirements</b>		62
CPS 149	Creative Media Applications	3
CPS 150	Algorithms & Programming I (Applies to CAP Natural Science)	4
CPS 151	Algorithms & Programming II	4
CPS 242	Web Application Development	3
CPS 250	Computer Organization and Architecture	3
CPS 310	Systems Analysis	3
CPS 312	Systems Design	3
CPS 341	Discrete Structures	3
CPS 350	Data Structures & Algorithms	3
CPS 356	Operating Systems	3
CPS 490	Capstone I (Satisfies CAP Major Capstone)	3
Select four CPS courses (310 level or above)		12
<b>Concentration: courses below or an approved minor</b>		15-27
ACC 207	Introduction to Financial Accounting	
ACC 208	Introduction to Managerial Accounting	
ECO 203	Principles of Microeconomics	
ECO 204	Principles of Macroeconomics	
MGT 301	Organizational Behavior	
MKT 300	Survey of Marketing	
<b>Breadth</b>		
ASI 150	Introduction to the University Experience	1
PHL 319	Information Ethics (Satisfies CAP Practical Ethical Action and Adv Studies in PHL)	3
Social and Behavioral Sciences (includes CAP Social Science) <sup>1</sup>		6
Total Hours to total at least		120

<sup>1</sup> This requirement, and CAP components, will be satisfied in some cases by the minor that is chosen.

## Bachelor of Science with a major in Computer Science (cps) Minimum 120 Hours

### Common Academic Program (CAP)

*credit hours will vary depending on courses selected		
First-Year Humanities Commons <sup>1</sup>		12
HST 103	West and the World	
REL 103	Introduction to Religious and Theological Studies	
PHL 103	Intro To Philosophy	
ENG 100	Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>		0-3
ENG 200	Writing Seminar II	
Oral Communication		3
CMM 100	Principles of Oral Communication	

Mathematics	3
Social Science	3
Arts	3
Natural Sciences <sup>4</sup>	7
Crossing Boundaries	variable credit
Faith Traditions	
Practical Ethical Action	
Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

### Science Breadth Requirements

MTH 168	Analytic Geometry & Calculus I (Satisfies CAP Mathematics)	4
MTH 169	Analytic Geometry & Calculus II	4
MTH 218	Analytic Geometry & Calculus III	4
MTH 310	Linear Algebra & Matrices <sup>1</sup>	3
or CPS 353	Numerical Methods I	
MTH 367	Statistical Methods I	3
Select one natural sciences group from (Applies to CAP Natural Sciences):		8
BIO 151 & 151L & BIO 152 & BIO 152L	Concepts of Biology I: Cell & Molecular Biology and Concepts of Biology Laboratory: Cell & Molecular Biology and Concepts of Biology II: Evolution & Ecology and Concepts of Biology Laboratory II: Evolution & Ecology	
CHM 123 & 123L & CHM 124 & CHM 124L	General Chemistry and General Chemistry Laboratory and General Chemistry and General Chemistry Laboratory	
GEO 115 & 115L & GEO 116 & GEO 116L	Physical Geology and Physical Geology Laboratory and Geological History of the Earth and Geological History of the Earth Laboratory	
PHY 206 & PHY 207 & PHY 210L & PHY 211L	General Physics I - Mechanics and General Physics II - Electricity & Magnetism and General Physics Laboratory and General Physics Laboratory II	
Natural Sciences <sup>2</sup>		6

<b>Major Requirements</b>		50
CPS 149	Creative Media Applications	3



CPS 150	Algorithms & Programming I	4
CPS 151	Algorithms & Programming II	4
CPS 250	Computer Organization and Architecture	3
CPS 341	Discrete Structures	3
CPS 350	Data Structures & Algorithms	3
CPS 352	Concepts and Implementation of Programming Languages	3
CPS 356	Operating Systems	3
CPS 450	Design and Analysis of Algorithms (Satisfies CAP Integrative)	3
CPS 490	Capstone I (Satisfies CAP Major Capstone)	3
CPS 491	Capstone II	3
Select five CPS courses (300/400 level) <sup>3</sup>		15

**Breadth**

ASI 150	Introduction to the University Experience	1
PHL 319	Information Ethics (Satisfies CAP Practical Ethical Action and Adv Studies in PHL)	3
Social and Behavioral Sciences (Includes CAP Social Science)		6
Total Hours to total at least		120

<sup>1</sup> CPS 353 will not count towards major requirement.

<sup>2</sup> Select two acceptable courses for Science or Engineering majors.

<sup>3</sup> These courses may be taken from any area as defined by the department. At least three courses in an area are required for obtaining a concentration.

## Minor in Computer Information Systems (cis)

**Computer Information Systems**

CPS 150	Algorithms & Programming I	4
CPS 151	Algorithms & Programming II	4
CPS 242	Web Application Development	3
CPS 310	Systems Analysis	3
CPS 312	Systems Design	3
Select two CPS courses (320 level or above)		6
Total Hours		23

## Minor in Computer Science (cps)

**Computer Science**

CPS 150	Algorithms & Programming I	4
CPS 151	Algorithms & Programming II	4
CPS 350	Data Structures & Algorithms	3
Select three CPS courses (320 level or above, excluding CPS 437)		9
Total Hours		20

• Bachelor of Science, Computer Information Systems (p. 152)

• Bachelor of Science, Computer Science (p. 154)

## Computer Information Systems

**First Year**

Fall	Hours Spring	Hours
ASI 150	1 CPS 150	4

CPS 149	3 MTH 149	3
MTH 148	3 Science w/lab	4
ENG 100 (satisfies CAP Writing Seminar)	3 REL 103, PHL 103, or HST 103	3
REL 103, PHL 103, or HST 103	3 CMM 100	3
REL 103, PHL 103, or HST 103	3	
		16
		17

**Second Year**

Fall	Hours Spring	Hours
CPS 151	4 CPS 250	3
CPS 242	3 CPS 350	3
MTH 367	3 Science w/ lab	4
ACC 207	3 ACC 208	3
ENG 200	3 Social Science (CAP)	3
		16
		16

**Third Year**

Fall	Hours Spring	Hours
CPS 310	3 CPS 312	3
CPS 341	3 CPS elective	3
ECO 203	3 ECO 204	3
MGT 301	3 MKT 300	3
Arts	3 PHL 319 (PEA)	3
	Adv PHL or REL (FT)	3
		15
		18

**Fourth Year**

Fall	Hours Spring	Hours
CPS 356	3 CPS 490	3
CPS elective	3 CPS elective	3
Social Science	3 CPS elective	3
Adv HST	3 Integrative	3
Inquiry	3 Diversity and Social Justice	3
		15
		15

Total credit hours: 128

## Computer Science

**First Year**

Fall	Hours Spring	Hours
ASI 150	1 CPS 150	4
CPS 149	3 MTH 169	4
MTH 168	4 Science w/lab	4
Science w/lab	4 REL 103, PHL 103, or HST 103 (satisfies CAP Humanities)	3
ENG 100 (satisfies CAP Writing Seminar)	3 REL 103, PHL 103, or HST 103 (satisfies CAP Humanities)	3
REL 103, PHL 103, or HST 103 (satisfies CAP Humanities)	3	
		18
		18

**Second Year**

Fall	Hours Spring	Hours
CPS 151	4 CPS 350	3
CPS 250	3 CPS 352	3
MTH 218	4 MTH 310 or CPS 353	3
Social Science (CAP)	3 CMM 100	3
ENG 200	3 Arts	3
	<b>17</b>	<b>15</b>

**Third Year**

Fall	Hours Spring	Hours
CPS 341	3 CPS 356	3
MTH 367	3 CPS elective	3
CPS 450	3 Science elective	3
Science elective	3 Social Science	3
Adv HST	3 PHL 319 (PEA)	3
	<b>15</b>	<b>15</b>

**Fourth Year**

Fall	Hours Spring	Hours
CPS 490	3 CPS 491	3
CPS elective	3 CPS elective	3
CPS elective	3 CPS elective	3
Inquiry	3 Diversity and Social Justice	3
Adv PHL/REL (FT)	3 Integrative	3
	<b>15</b>	<b>15</b>

Total credit hours: 128

**Courses****CPS 107. Introduction to Computer Science. 3 Hours**

An introduction to the field of Computer Science, covering computers and society, the internals and externals of computer hardware and software, as well as some exposure to advanced topics of artificial intelligence, computer forensics, and databases. Intended for science and engineering students.

**CPS 111. Introduction to Personal Computers. 3 Hours**

Emphasis on use of operating system, particularly file organization, and applications: word processor, spreadsheet, database and presentation software.

**CPS 132. Computer Programming for Engineering & Science. 3 Hours**

Fundamentals of computer programming including algorithms, program structure, library routines, debugging, and program verification. Calculus-based computer solutions of problems from science and engineering using C++. Corequisite(s): MTH 168.

**CPS 144. Introduction to Computer Programming. 3 Hours**

Fundamentals of computer programming including algorithms, program structure, library routines, debugging, and program verification. Computer solutions of problems from social sciences using a suitable compiler language such as Visual Basic.

**CPS 149. Creative Media Applications. 3 Hours**

Multidisciplinary, project-driven learning process that encourages students to develop problem solving and teamwork skills while fostering creativity and logic. The goal is to not only provide students with some "programming maturity," but to also engage them through working in small teams on existing projects related to their discipline and interest. Projects may include creative animations and games, mobile app developments, or avatars.

**CPS 150. Algorithms & Programming I. 4 Hours**

Introduction to computers and programming using a high-level, structured language. Topics include problem solving, algorithms, programming constructs, data representation, stepwise refinement, and debugging.

**CPS 151. Algorithms & Programming II. 4 Hours**

Algorithms and Programming II covers object-oriented design and development, data abstraction, exception handling, linked lists, stacks, queues, binary trees, and recursion using a high level, structured language. Prerequisite(s): CPS 150.

**CPS 242. Web Application Development. 3 Hours**

Web application development using the state-of-the-art environments such as markup languages, scripting languages, dynamic web pages, server side technologies, and database access. Prerequisite(s): CPS 151.

**CPS 250. Computer Organization and Architecture. 3 Hours**

Machine and assembly language instructions, and writing assembly programs. Design of basic logic circuits needed in constructing a computer. Design of circuits for information encoding, arithmetic units, and transferring and storing information. Data path and control unit for a simple processor. Multiprocessing and alternative parallel systems. Prerequisite(s): CPS 151.

**CPS 309. Topics in Computer Science. 1-4 Hours**

Lectures or laboratory work in areas of current interest. May be taken more than once. Does not count as upper level credit for majors/minors.

**CPS 310. Systems Analysis. 3 Hours**

Methodologies for developing software, software development life cycles, data flow approach for system development, data dictionary, process specification, input/output design, E-R diagrams, normalization, and introduction to object-oriented analysis. Prerequisite(s): CPS 151.

**CPS 312. Systems Design. 3 Hours**

Software design process; developing structured design (e.g., structure charts) from data flow approach using coupling, cohesion, and other design guidelines; fine-tuning object-oriented analysis model to design using design patterns, and implementation. Prerequisite(s): CPS 310.

**CPS 341. Discrete Structures. 3 Hours**

Propositional logic, Boolean algebra, predicate logic, logical deductions, proof techniques, sets, combinatorics, recurrences, functions, relations, discrete structures such as graphs, digraphs, and associated algorithms. Prerequisite(s): CPS 150.

**CPS 343. Comparative Languages. 3 Hours**

Language design issues, formal syntax specification, data types and storage methods, activation records and procedural object oriented, functional, and logic programming paradigms. Prerequisite(s): CPS 350.

**CPS 346. Operating Systems I. 3 Hours**

Semaphores, conditions, monitors, and kernels. Concurrent programming, interrupts, memory, and process management. Design and implementation of multithreaded and distributed system components using concurrent languages. Prerequisite(s): CPS 250, CPS 350.

**CPS 350. Data Structures & Algorithms. 3 Hours**

Dynamic nonlinear data structures including trees, binary trees, search trees, balanced search trees, priority queues, and graphs, with an emphasis on their implementation, uses, and associated algorithms. Analysis of the computational complexity of algorithms related to these structures. Prerequisite(s): CPS 151.

**CPS 352. Concepts and Implementation of Programming Languages. 3 Hours**

Study of programming language concepts through the implementation of interpreters and assessment of the conceptual differences in the resulting languages. Concepts covered include syntax and semantics, regular and context-free grammars, parsing, binding, scope, parameter passing, lazy evaluation, types, currying, and continuations. A comparative survey of the imperative, functional, logical, and object-oriented paradigms of programming is presented. Prerequisite(s): CPS 350.

**CPS 353. Numerical Methods I. 3 Hours**

Study of the algorithms of numerical mathematics with emphasis on interpolation, the solution of nonlinear equations, and linear systems of equations including matrix methods; analysis of errors associated with the algorithms. Prerequisite(s): (CPS 132 or CPS 150); MTH 169.

**CPS 356. Operating Systems. 3 Hours**

Introduces the theoretical and practical concepts underlying an operating system's structure and operation. Topics include process and thread creation and management, scheduling, concurrent, multi-threaded programming and synchronization, deadlock, memory management, virtual memory, and computer security. Prerequisite(s): (CPS 250 or ECE 314) and CPS 350.

**CPS 387. Computer System Design I. 3 Hours**

Study of the elements of computer design. Design of combinatorial and sequential logic circuits using current integrated circuit devices. Discussion of encoders, decoders, registers, counters, etc. as applied to design and use of control, arithmetic, logic, and storage units. Instruction set, addressing modes and CPU design. Laboratory experiments with these devices. Prerequisite(s): CPS 250, CPS 341.

**CPS 410. User Interface Design and Development. 3 Hours**

Addresses the practical problems of designing interfaces for modern software as well as other interactive media. Topics include interaction framework and styles, design principles, design models, new interactive technologies, usability testing and facets of interaction. Group activities and project work is an integral part of this course. Prerequisite(s): CPS 350.

**CPS 415. Software Testing and Security Analysis. 3 Hours**

Detailed examination of the software testing and security analysis process. Topics include testing methodologies, code analysis techniques, and secure programming principles and practices. Prerequisite(s): CPS 350.

**CPS 420. Software Engineering. 3 Hours**

Provides an overview of the software engineering discipline. Topics include software processes, requirements engineering, system modeling, architectural design, software testing, dependability and security, software reuse, distributed software engineering, project planning, quality management, configuration management, and process improvement. Prerequisite(s): CPS 350.

**CPS 422. Software Project Management. 3 Hours**

Introduction to software project management. Topics include process models for software development, project planning techniques, estimation techniques, measuring and controlling work products and processes, managing project risk, teams and communication, and organizational issues. Prerequisite(s): CPS 310.

**CPS 424. Discrete Event Simulation Techniques. 3 Hours**

Design and use of simulation models; study and use of special-purpose simulation languages such as GPSS and GASP IV, SIMSCRIPT II.5. Applications. Prerequisite(s): CPS 151.

**CPS 430. Database Management Systems. 3 Hours**

Physical and logical organization of databases: the entity-relationship model; relational database model; the data definition and data manipulation language of a commercial database management system; integrity constraints; conceptual database design. Prerequisite(s): CPS 350.

**CPS 432. Database Management Systems II. 3 Hours**

Study of query execution and optimization, transaction management, concurrency control, recovery and security techniques. Advanced data models and emerging trends in database systems, like object oriented database systems, distributed database systems, the client-server architecture, multidatabase and heterogeneous systems. Other current database topics and emerging technologies will be discussed. Prerequisite(s): CPS 430.

**CPS 433. Cyber Forensics. 3 Hours**

Preserving, recovering, and analyzing digital evidence found in physical and virtual worlds. Topics include data and information retrieval; computer/media forensic analysis, techniques, and tools; and basic criminal law concepts. Prerequisite(s): CPS 356.

**CPS 434. Big Data and Cloud Computing. 3 Hours**

Focuses on technologies to make intelligent decisions for scientific and business applications. Topics include semantic web, knowledge representation languages for expressing metadata, machine learning, data visualization, data integration, and predictive models. Prerequisite(s): CPS 350.

**CPS 437. System Architectures & Networking. 3 Hours**

Issues and techniques used in the physical design of computer-based information systems. Basic operating systems, hardware architecture and networking principles. Intended for students majoring in MIS; not open to students majoring in CPS, CIS, or PCS. Prerequisite(s): MIS 380, MIS 385.

**CPS 444. UNIX/Linux Programming. 3 Hours**

Prepares students for developing software in the UNIX/Linux environment using the C programming language. Topics include system libraries and system calls, shells, system structures and internals, interprocess communication (pipes and signals), network programming (client-server model and sockets), pattern matching and filters, shell programming, automatic program generation, and GUI programming. Prerequisite(s): CPS 356.

**CPS 450. Design and Analysis of Algorithms. 3 Hours**

Introduction to Order notation and algorithm analysis. Emphasis will be on learning algorithm design techniques such as divide and conquer, greedy approach, and dynamic programming through exposition of classical algorithms from domains such as sorting, string matching, and graph algorithms. Hardness of problems and introduction to the complexity classes P, NP, and NP-complete. Prerequisite(s): CPS 341, CPS350.

**CPS 455. Computer Architecture and Design. 3 Hours**

Provides a foundation for understanding and evaluating the design principles incorporated in modern computers. Topics include history and classification of computers, instruction-level, data-level, and thread-level parallelism. Prerequisite(s): CPS 250, CPS 350.

**CPS 460. Computer Graphics. 3 Hours**

Introduction to primitives and interactive graphics software development. Topics include transforms, clipping, modeling, rendering, texture, animation, and ray tracing. Prerequisite(s): CPS 350.

**CPS 460H. Computer Graphics. 3 Hours**

Introduction to primitives and interactive graphics software development. Topics include transforms, clipping, modeling, rendering, texture, animation, and ray tracing. Prerequisite(s): CPS 350.

**CPS 465. Interactive Media. 3 Hours**

Provides an exposure to the capabilities of new digital tools to create new experiences. Topics include tools/techniques for collecting, analyzing, and visualizing 3D data; interactive audio/video using motion/light detectors; mobile interfaces; animation; smart rooms; and social networks. Prerequisite(s): CPS 350.

**CPS 470. Computer Networks. 3 Hours**

Computer Networks focus on Internet protocols. Topics include packet-switch and multi-access networks, routing, flow control, congestion control, quality of service, Internet protocols, wireless networks, security, and the design of network services. Prerequisite(s): CPS 350.

**CPS 472. Computer and Network Security. 3 Hours**

Computer and Network Security covers information protection. Topics includes techniques for security in multi-user and distributed systems, principles of secure design, cryptography, authentication, access-control, intrusion detection and viruses, firewalls, wireless security, cracking WEP keys, and VPN security. Prerequisite(s): CPS 356.

**CPS 473. Reverse Code Engineering. 3 Hours**

Study theories on the application of cyber power to achieve certain objectives. Topics includes cyber policy, tracing strategy, targeting, cyber intelligence, measuring effects, and legal and ethical issues. Prerequisite(s): CPS 350.

**CPS 477H. Honors Thesis. 3 Hours**

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

**CPS 478H. Honors Thesis. 3 Hours**

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

**CPS 480. Artificial Intelligence. 3 Hours**

Fundamentals concepts and techniques of intelligent systems. Topics includes knowledge representation, search strategies, predicate logic, and expert systems. Prerequisite(s): CPS 350.

**CPS 481. Intelligent Systems and Machine Learning. 3 Hours**

State-of-art techniques in building intelligent systems. Topics include soft computing, agents and multiagent systems, and machine learning. Prerequisite(s): CPS 350.

**CPS 482. Automata Theory. 3 Hours**

Formal languages (regular, context-free, recursive, and recursively enumerable), machine models (deterministic and non-deterministic finite automata, push down automata, Turing machines), grammars (regular, context-free, and unrestricted), interplay among these concepts, Church-Turing thesis, and undecidability. Prerequisite(s): CPS 341.

**CPS 482H. Automata Theory. 3 Hours**

Formal languages (regular, context-free, recursive, and recursively enumerable), machine models (deterministic and non-deterministic finite automata, push down automata, Turing machines), grammars (regular, context-free, and unrestricted), interplay among these concepts, Church-Turing thesis, and undecidability. Prerequisite(s): CPS 341.

**CPS 483. Graph Algorithms. 3 Hours**

Design and analysis of algorithms for problems based on graphs. Classical algorithms and efficient algorithms for restricted domains of graphs will be covered. Analysis of algorithms, complexity classes P, NP, and NP-complete, traversals, bi-connectedness, strongly-connectedness, 2-SAT, planarity testing, and algorithms for restricted classes of graphs. Prerequisite(s): CPS 341, CPS 350.

**CPS 485. Evolutionary Computation. 3 Hours**

The history and use of Evolutionary Computation (EC) are explored. Popular approaches to EC (genetic algorithms, genetic programming, evolution strategies, evolutionary programming) are defined and discussed. Coursework includes implementation of evolutionary techniques and review and analysis of literature in the field. Prerequisite(s): CPS 350.

**CPS 490. Capstone I. 3 Hours**

Principles, practices, and methodology for development of large software systems using data flow and object-oriented methodologies. User interface design, software testing, and software project management. Selecting and planning a team project; this involves team formation, project selection, project planning, and proposal writing and presentation. Prerequisite(s): CPS 350.

**CPS 491. Capstone II. 3 Hours**

An exercise in the design, implementation, documentation, and deployment of a group project culminating in a presentation to the computer science faculty and industry representatives. Prerequisite(s): CPS 490.

**CPS 496. Cooperative Education. 1-3 Hours**

Computer science cooperative education work experience in an approved organization. Not open to students with credit in CPS 497. Credit does not apply to major requirements. Repeat to a maximum of three semester hours. Prerequisite(s): Twelve hours of upper-level CPS courses with a GPA of 3.0; total ninety semester hours with a GPA of 2.75; permission of the department in advance of the work.

**CPS 497. Internship. 1-3 Hours**

Computer science work experience in an approved organization. Not open to students with CPS 496 credit. Credit does not apply to major requirements. Repeat to a maximum of three semester hours. Prerequisite(s): Twelve semester hours of upper-level CPS courses with GPA of 3.0; total ninety semester hours and 2.75 GPA; permission of department in advance of the work.



**CPS 498. Problems in Computer Science. 1-4 Hours**  
Individual readings and research in a specialized area. (See CPS 499.)  
By arrangement. May be taken more than once for additional credit.  
Prerequisite(s): Permission of department chairperson.

**CPS 499. Special Topics in Computer Science. 1-4 Hours**  
Lectures or laboratory work in advanced topics from the various areas of computer science. By arrangement. May be taken more than once.  
Prerequisite(s): Permission of department chairperson.

# Criminal Justice Studies

Major:

- Bachelor of Arts, Criminal Justice Studies (p. 158)

Minor:

- Criminal Justice (p. 160)

Criminal Justice is the scientific study of crime, deviance, and the agencies of the criminal justice system. The Bachelor of Arts with a major in criminal justice studies, is a broadly structured interdisciplinary and criminological curriculum designed to introduce students to:

1. A critical theory of criminal justice/criminology and
2. Requisite knowledge for public service, e.g., law enforcement and/or investigative services at the local, state and national levels; careers in the correctional field, community programs, and other rehabilitative services, as well as staff positions in the judiciary system; and
3. Preparation for pursuing advanced study in a criminological graduate program or law school.

In addition to courses in criminal justice studies, students take courses in political science, psychology, sociology, and social work.

Those who enter the University of Dayton as first-year students, or as transfers without associate degrees, will be classified under Option A, a total program sequence. Students who transfer here with acceptable associate degrees in specific fields similar or closely related to criminal justice will be classified under Option B, a transfer program sequence. All students transferring into the curriculum must be in good academic standing and meet entry requirements.

A minor in criminal justice studies consists of 18 semester hours.

Students intending to major or minor in criminal justice studies should consult with the program director to begin planning their program. It is the sole responsibility of students to inform themselves of whatever changes occur in the curriculum and to observe all the regulations, procedures, and requirements of the University and the criminal justice studies program. The Criminal Justice Studies Program is a part of the Department of Sociology, Anthropology, and Social Work.

## Criminal Justice Committee

Arthur J. Jipson, Director

Additional faculty who teach in the Criminal Justice Studies Program are located in several social science departments including: Sociology, Anthropology, and Social Work; Psychology; and Political Science. Faculty who teach in the program: Apolito (Criminal Justice Studies/ Sociology), Becker (Sociology), Berry (Psychology), Cassiman (Social Work), Davis-Berman (Social Work), Donnelly (Sociology), Forbis (Sociology), Ghare (Political Science), Holcomb (Sociology), Ingram (Political Science), Longazel (Sociology), Majka, L. (Sociology), Majka, T. (Sociology), Martorano Miller (Political Science), Neeley (Political

Science), Pierce (Political Science), Reeb (Psychology), Thompson-Miller (Sociology)

# Bachelor of Arts with a major in Criminal Justice Studies-Option A (cjs) Minimum 124 Hours

## Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup> 12

HST 103 West and the World

REL 103 Introduction to Religious and Theological Studies

PHL 103 Intro To Philosophy

ENG 100 Writing Seminar I <sup>2</sup>

Second-Year Writing Seminar <sup>3</sup> 0-3

ENG 200 Writing Seminar II

Oral Communication 3

CMM 100 Principles of Oral Communication

Mathematics 3

Social Science 3

Arts 3

Natural Sciences <sup>4</sup> 7

Crossing Boundaries variable credit

Faith Traditions

Practical Ethical Action

Inquiry

Integrative

Advanced Study variable credit

Philosophy and/or Religious Studies

Historical Studies

Diversity and Social Justice 3

Major Capstone 0-3

- <sup>1</sup> Completed with ASI 110 and ASI 120.
- <sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.
- <sup>3</sup> Completed with ENG 200H or ASI 120.
- <sup>4</sup> Must include two different disciplines and accompanying lab.

## Liberal Studies Curriculum

Creative and Performing Arts (May include CAP Arts) 3

L2 Proficiency (Proficiency in a language other than English) 0-11

Literature (May include CAP Components) 3

Mathematics, excluding MTH 205 (Satisfies CAP Mathematics) <sup>1</sup> 3

Natural Sciences (Satisfies CAP Natural Science) 11

Social Sciences (Includes CAP Social Science) 12

Major Requirements <sup>2, 3</sup> 37

CJS 101 Introduction to Criminal Justice Studies 3-4

CJS 207 Research Methods in Criminal Justice Studies <sup>1, 4</sup> 3

CJS 347 Senior Project Design 1

CJS 447	Senior Seminar in Criminal Justice Studies (Satisfies CAP Major Capstone)	3
SOC 305	Criminological Theory	3
Select two behavior courses from:		6
PSY 363	Abnormal Psychology	
PSY 461	Current Implications of Drug Dependency	
SOC 325	Deviant Behavior	
SOC 327	Criminology	
SOC 410	Victimology	
SWK 325	Child Abuse	
Select two institutions courses from:		6
CJS 303	Corrections	
POL 303	State & Local Government	
POL 305	Introduction to Public Administration	
POL 360	Urban Politics & Policy	
SOC 323	Juvenile Justice	
SWK 305	Social Services in the Health Field	
Select two law courses from:		6
CJS 305	Criminal Law	
CJS 315	Criminal Procedure	
POL 301	The American Judicial Process	
POL 411	Constitutional Law	
POL 450	Civil Liberties	
SOC 326	Law & Society	
Select two social structure courses from:		6
CJS 322	Policing & Society	
CJS 336	Comparative Criminal Justice	
SOC 328	Racial & Ethnic Relations	
SOC 339	Social Inequality	
SOC 351	Urban Sociology	

**Breadth**

ASI 150	Introduction to the University Experience	1
Total Hours to total at least		124

<sup>1</sup> CJS 207, Research Methods in Criminal Justice Studies, requires as a prerequisite MTH 207 or PSY 216 or SOC 308. Neither PSY 216 nor SOC 308 fills the three semester hours mathematics requirement for graduation.

<sup>2</sup> Internships and independent studies may be taken in CJS, POL, PSY, and SOC that have a Criminal Justice Studies emphasis. No more than six semester hours of internships may be taken. Also to be offered is CJS 300 Criminal Justice Studies Career Development, CJS 399, Special Topics in Criminal Justice Studies and CJS 497, Service Learning Experience. This course work is in addition to the thirty-six hours required for a CJS interdisciplinary major in the Option A, total program sequence. They are not to be used as substitute courses for those listed in the areas of behavior, institutions, law and/or social structure, unless approved in advanced by the director of the Criminal Justice Studies program and the College of Arts and Sciences.

<sup>3</sup> May include CAP components.

<sup>4</sup> May substitute SOC 208, POL 207, or PSY 217.

## Bachelor of Arts with a major in Criminal Justice Studies-Option B (cjs) Minimum 124 Hours

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
HST 103	West and the World
REL 103	Introduction to Religious and Theological Studies
PHL 103	Intro To Philosophy
ENG 100	Writing Seminar I <sup>2</sup>
Second-Year Writing Seminar <sup>3</sup>	0-3
ENG 200	Writing Seminar II
Oral Communication	3
CMM 100	Principles of Oral Communication
Mathematics	3
Social Science	3
Arts	3
Natural Sciences <sup>4</sup>	7
Crossing Boundaries	variable credit
Faith Traditions	
Practical Ethical Action	
Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

### Liberal Studies Curriculum

Creative and Performing Arts (May include CAP Arts)	3
L2 Proficiency (Proficiency in a language other than English)	0-11
Literature (May include CAP Components)	3
Mathematics, excluding MTH 205 (Satisfies CAP Mathematics) <sup>1</sup>	3
Natural Sciences (Satisfies CAP Natural Science)	11
Social Sciences (Includes CAP Social Science)	12

**Major Requirements** <sup>2, 3, 4, 5</sup> 22

CJS 207	Research Methods in Criminal Justice Studies <sup>1</sup>	3
CJS 347	Senior Project Design	1
CJS 447	Senior Seminar in Criminal Justice Studies (Satisfies CAP Major Capstone)	3
SOC 305	Criminological Theory	3

Select one behavior course from:	3
PSY 363 Abnormal Psychology	
PSY 461 Current Implications of Drug Dependency	
SOC 325 Deviant Behavior	
SOC 327 Criminology	
SOC 410 Victimology	
SWK 325 Child Abuse	
Select one institutions course from:	3
CJS 303 Corrections	
POL 303 State & Local Government	
POL 305 Introduction to Public Administration	
POL 360 Urban Politics & Policy	
SOC 323 Juvenile Justice	
SWK 305 Social Services in the Health Field	
Select one law course from:	3
CJS 305 Criminal Law	
CJS 315 Criminal Procedure	
POL 301 The American Judicial Process	
POL 411 Constitutional Law	
POL 450 Civil Liberties	
SOC 326 Law & Society	
Select one social structure course from:	3
CJS 322 Policing & Society	
CJS 336 Comparative Criminal Justice	
SOC 328 Racial & Ethnic Relations	
SOC 339 Social Inequality	
SOC 351 Urban Sociology	

**Breadth**

ASI 150 Introduction to the University Experience	1
ENG 316 Elements of Style	3
ENG 370 Report & Proposal Writing (Satisfies CAP Inquiry)	3
or ENG 372 Business Communication	
or ENG 474 Argument and Style	
Total Hours to total at least	124

<sup>1</sup> CJS 207, Research Methods in Criminal Justice Studies, require as a prerequisite MTH 207 or PSY 216 or SOC 308. Neither PSY 216 nor SOC 308 fills the three semester hours mathematics requirements for graduation. May substitute SOC 208, POL 207, PSY 217 for CJS 207.

<sup>2</sup> To be admitted as a major in the program under Option B, a transfer student must have received an accredited associate degree in corrections, law enforcement, police administration, police science, or a similar field of criminal justice and must have a 2.5 cumulative grade-point average on a 4.0 grading system. For criminal justice studies majors who have completed the basic requirements for an accredited two-year criminal justice degree, sixty semester hours beyond the associate degree is suggested, which includes a minimum of twenty-one semester hours in the program. The Liberal Studies Curriculum is required for all criminal justice studies transfer majors in addition to the baccalaureate degree requirements if they were not included in the candidates' associate degree programs.

- <sup>3</sup> Internships and Independent Studies may be taken in CJS, POL, PSY, and SOC that have a criminal justice studies emphasis. No more than six semester hours of internships may be taken. Also to be offered is CJS 300 Criminal Justice Studies Career Development, CJS 399, Special Topics in Criminal Justice Studies and CJS 497, Service Learning Experience. This course work is in addition to the hours required for a CJS interdisciplinary major in the Option B, transfer program sequence. They are not to be used as substitute courses for those listed in the areas of behavior, institutions, law and/or social structure, unless approved in advance by the director of the Criminal Justice Studies program and the College of Arts and Sciences.
- <sup>4</sup> To be considered a viable candidate for graduation, a student must have completed a minimum of 124 semester hours with accepted transfer credits.
- <sup>5</sup> May include CAP components.

## Minor in Criminal Justice Studies (cjs)

**Criminal Justice Studies**

CJS 101 Introduction to Criminal Justice Studies	3-4
SOC 305 Criminological Theory	3
Select four CJS courses (300/400 level) <sup>1</sup>	12
Total Hours	18-19

<sup>1</sup> One course from each of the four areas involving behavior, institutions, law, and social structure.

**First Year**

Fall	Hours Spring	Hours
ASI 150	1 PSY 101, POL 101, or POL 201	3
CJS 101	3 SCI 190	3
SOC 101	3 SCI 190L	1
HST 103 (CAP Humanities)	3 ENG 100 (CAP Writing Seminar)	3
MTH 114	3 CMM 100 (CAP Communication)	3
Language 101	4 Language 141	4
	<b>17</b>	<b>17</b>

**Second Year**

Fall	Hours Spring	Hours
SCI 210 or 220	3 SCI 230 or 240	3
SCI 210L or 220L	1 Language contextual course	3
REL 103 (CAP Humanities)	3 ENG 200	3
PHL 103 (CAP Humanities)	3 Behavior course	3
Behavior course	3 Institutions course	3
Arts	3 CJS 300	1
	<b>16</b>	<b>16</b>

**Third Year**

Fall	Hours Spring	Hours
Institutions course	3 CJS 347	1
SOC 305	3 Law course	3
Adv REL or PHL	3 Inquiry	3
CJS 207 or SOC 208	3 Adv REL or PHL	3

PSY 101, ECO 203, or POL 201	3 Adv HST	3
	General Elective	3
	<b>15</b>	<b>16</b>

**Fourth Year**

Fall	Hours Spring	Hours
CJS 447	3 Social Structure	3
Law course	3 Literature	3
Social Structure	3 Diversity and Social Structure	3
Integrative	3 Faith Traditions	3
Practical Ethical Action	3 General Elective	3
	<b>15</b>	<b>15</b>

Total credit hours: 127

**Courses****CJS 101. Introduction to Criminal Justice Studies. 3-4 Hours**

Introduction to the field of criminal justice studies, stressing the theoretical foundations, origin, nature, methods, and limitations of criminal justice studies as a college curriculum.

**CJS 207. Research Methods in Criminal Justice Studies. 3 Hours**

Review of the nature, language, and processes of inquiry involving experiments, studies, surveys, and investigations. The instrumentation, types, and structures of content analysis, questionnaires, interviews, and structured observation, including, analytic techniques, data processing resources, and preparation of research reports are also examined. Prerequisite(s): MTH 207 or PSY 216 or SOC 308.

**CJS 300. Criminal Justice Studies Career Development. 1 Hour**

Exploration of career opportunities and the professional career placement process including setting goals and identifying educational objectives, noting professional concerns, the role of a given criminal justice organization, and assessing experiences.

**CJS 303. Corrections. 3 Hours**

The administration of correctional institutions and other detention facilities with emphasis on probation and parole systems to include the rehabilitation and treatment of the incarcerated with reference to correctional law cases.

**CJS 305. Criminal Law. 3 Hours**

Principles of criminal liability, preparation of case materials, court procedures, and case disposition.

**CJS 315. Criminal Procedure. 3 Hours**

Fundamentals of criminal procedure: arrest, search, and seizure; interrogation, constitutional limitations upon state and federal rules of criminal procedure. Prerequisite(s): A course in criminal law.

**CJS 322. Policing & Society. 3 Hours**

Analyzes the history of policing in society and assesses the social and political forces that are correlated with both the rise of formal policing and the variety of structures law enforcement agencies have assumed. Reviews the primary functions of policing in American society and examines those issues affecting federal, state, county, municipal and private policing.

**CJS 336. Comparative Criminal Justice Systems. 3 Hours**

Survey of cross-cultural uniformities and diversities in law-enforcement agencies, correctional systems, and the courts in selected countries. Prerequisite(s): An introductory course in criminal justice.

**CJS 347. Senior Project Design. 1 Hour**

Preparation for the criminal justice capstone course with a focus on a workable research topic, literature review, and research methods design. Required for Criminal Justice majors. Prerequisites: SOC 208 or POL 207 or PSY 217; SOC 305 (may be taken as a corequisite).

**CJS 399. Special Topics in Criminal Justice Studies. 1-3 Hours**

An extensive examination of a current topic affecting the criminal justice system and its law enforcement, corrections or judicial components. May be repeated to a maximum of three semester hours when the topic changes.

**CJS 440. Independent Study. 3 Hours**

Directed study and research on selected topics of significant academic publications in law enforcement and criminal justice. Prerequisite(s): An introductory CJS course; permission of instructor.

**CJS 447. Senior Seminar in Criminal Justice Studies. 3 Hours**

Capstone experience in criminal justice studies consisting of a seminar on research and writing in criminology and criminal justice, an empirical research project of the student's choosing, and a written and oral presentation of the research.

**CJS 477H. Honors Thesis. 3 Hours**

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

**CJS 478H. Honors Thesis. 3 Hours**

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved CJS 477; approval of University Honors Program.

**CJS 495. Internship in Criminal Justice I. 1-3 Hours**

Supervised experience solely in a civilian capacity in a criminal justice or law-enforcement agency. Open to pre-service criminal justice studies majors only; in-service students do not qualify. Students who enroll for internship credit are not given a stipend. Credit granted only under Grading Option Two. Prerequisite(s): 2.5 cumulative grade-point average; sophomore status; permission of program director.

**CJS 496. Internship in Criminal Justice II. 1-3 Hours**

Continuation of CJS 495.

**CJS 497. Service Learning Experience. 1 Hour**

Supervised community research or service experience that complements a specific upper division course in Criminal Justice Studies. No more than three semester hours of Social Science 497 credits can count for graduation. Repeatable up to three semester hours. Prerequisite(s): Permission of instructor. Corequisite(s): CJS course (300- or 400-level).

**Economics**

Major:

- Bachelor of Arts, Economics (p. 162)



**Minor:**

- Economics (p. 162)

In cooperation with the Department of Economics and Finance in the School of Business Administration, the College of Arts and Sciences offers the degree of Bachelor of Arts with a major in economics.

The field of economics covers topics ranging from making sound business decisions to tackling some of society's most challenging social issues. Economics students learn to think critically about how choices are made in the presence of scarcity. An undergraduate education in economics enables individuals to better understand and help resolve problems in today's business and society.

The major in economics requires 30 semester hours of courses in economics: ECO 203, ECO 204, ECO 346, ECO 347, ECO 410 or ECO 441, ECO 490, and four elective courses in economics.

A minor in economics is also available, requiring 18 semester hours of courses in economics: ECO 203, ECO 204, ECO 346, ECO 347 and two elective courses in economics.

Information on a specialized degree, applied mathematical economics, (MTE) is offered by the Department of Mathematics.

**Faculty**

Trevor Collier, Chairperson  
 Edmund B. O'Leary Chair in Economics: John Ruggiero  
 Professors: Caporale, Frasca, Ruggiero  
 Associate Professors: Collier, Gustafson, Poitras  
 Assistant Professors: Haskell, Williams  
 Lecturer: John

## Bachelor of Arts with a Major in Economics (ECO) Minimum 124 Hours

**Common Academic Program (CAP)**

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
HST 103 West and the World	
REL 103 Introduction to Religious and Theological Studies	
PHL 103 Intro To Philosophy	
ENG 100 Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>	0-3
ENG 200 Writing Seminar II	
Oral Communication	3
CMM 100 Principles of Oral Communication	
Mathematics	3
Social Science	3
Arts	3
Natural Sciences <sup>4</sup>	7
Crossing Boundaries	variable credit
Faith Traditions	
Practical Ethical Action	
Inquiry	
Integrative	

Advanced Study variable credit

Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

- Completed with ASI 110 and ASI 120.
- Or ENG 100A and ENG 100B, or ENG 200H, by placement.
- Completed with ENG 200H or ASI 120.
- Must include two different disciplines and accompanying lab.

**Liberal Studies Curriculum**

Creative and Performing Arts (May include CAP Arts)	3
L2 Proficiency (Proficiency in a language other than English)	0-11
Literature (May include CAP Components)	3
Mathematics (Satisfies CAP Mathematics) <sup>1, 2</sup>	6-9
MTH 138 Calculus I with Review <sup>3</sup> or MTH 148 Introductory Calculus I	
MTH 207 Introduction to Statistics <sup>4</sup>	
Natural Sciences (Satisfies CAP Natural Science)	11
Social Sciences, excluding ECO courses (Includes CAP Social Science)	12

**Major Requirements** 30

ECO 203 Principles of Microeconomics <sup>5</sup>	3
ECO 204 Principles of Macroeconomics <sup>5</sup>	3
ECO 346 Intermediate Microeconomic Analysis <sup>6</sup>	3
ECO 347 Intermediate Macroeconomic Analysis	3
ECO 410 Bus&Eco Forecasting	3
or ECO 441 Econometrics	
ECO 490 Senior Seminar in Applied Economics (Satisfies CAP Major Capstone)	3
ECO electives (300/400 level)	12

**Breadth**

ASI 150 Introduction to the University Experience	1
Total Hours to total at least	124

- In addition, MTH 149 strongly recommended.
- CAP Mathematics is satisfied with MTH 129, MTH 148, MTH 168, or MTH 207.
- MTH 168 or MTH 128-MTH 129 may be substituted with permission of department chairperson.
- May substitute DSC 210-DSC 211.
- Minimum C grade
- ECO 340 may be substituted for ECO 346 with permission of the department chairperson.

## Minor in Economics (ECO)

**Economics**

ECO 203 Principles of Microeconomics <sup>1</sup>	3
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ECO 204	Principles of Macroeconomics <sup>1</sup>	3
ECO 346	Intermediate Microeconomic Analysis <sup>2</sup>	3
ECO 347	Intermediate Macroeconomic Analysis	3
Select two ECO courses (300/400 level)		6
Total Hours		18

<sup>1</sup> ECO 300 and an upper level ECO course can substitute for ECO 203 and ECO 204.

<sup>2</sup> ECO 340 may be substituted for ECO 346 with permission of department chairperson.

#### First Year

Fall	Hours Spring	Hours
ASI 150	1 SCI 190	3
ECO 203	3 SCI 190L	1
PHL 103 (satisfies CAP Humanities)	3 MTH 138	4
MTH 137 (satisfies CAP Mathematics)	4 ENG 100	3
SOC 101	3 ECO 204	3
HST 103 (satisfies CAP Humanities)	3 CMM 100 (satisfies CAP Humanities)	3
	17	17

#### Second Year

Fall	Hours Spring	Hours
ENG 200	3 ECO 346	3
MTH 207	3 SCI 210	3
REL 103	3 SCI 210L	1
LNG 101	4 LNG 141	4
Intro Social Science	3 300/400 Social Science	3
	16	14

#### Third Year

Fall	Hours Spring	Hours
ECO 347	3 300/400 Eco elective	3
SCI 230	3 300/400 Eco elective	3
Social Science	3 CAP Arts	3
Integrative	3 Faith Traditions	3
Language contextual course	3 General elective	3
	15	15

#### Fourth Year

Fall	Hours Spring	Hours
ECO 410 or 441	3 ECO 490	3
300/400 Eco elective	3 300/400 Eco elective	3
Adv Philosophy/Religious Studies (CAP)	3 Adv Historical Studies (CAP)	3
Inquiry	3 Diversity and Social Justice (CAP)	3
General elective	3 Faith Traditions (CAP)	3
	15	15

Total credit hours: 124

## Courses

### ECO 203. Principles of Microeconomics. 3 Hours

An introduction to consumer and producer behavior in a market economy, demand and supply, pricing and firm behavior under perfect and imperfect competition, and the distribution of income. Discussion of current topics in microeconomics may be included.

### ECO 203H. Principles of Microeconomics. 3 Hours

An introduction to consumer and producer behavior in a market economy, demand and supply, pricing and firm behavior under perfect and imperfect competition, and the distribution of income. Discussion of current topics in microeconomics may be included.

### ECO 204. Principles of Macroeconomics. 3 Hours

Introductory economic analysis of the macroeconomy; the determination of gross national product, employment, inflation and the interest rate in the U.S. economy. Government policy, money and banking, and international trade are analyzed.

### ECO 204H. Principles of Macroeconomics. 3 Hours

Introductory economic analysis of the macroeconomy; the determination of gross national product, employment, inflation and the interest rate in the U.S. economy. Government policy, money and banking, and international trade are analyzed.

### ECO 301. Seminar in Market Economics. 3 Hours

Market solutions to economic and political issues. Topics vary, but may include issues relating to drugs, gun control, environmental concerns, government interventions, economic and political freedom, and others. Team taught course. Prerequisite(s): ECO 203.

### ECO 340. Managerial Economics. 3 Hours

Application of economic models to managerial decision making. Topics include demand analysis, forecasting demand, short-run cost analysis, long-run cost and production functions, pricing, and risk and uncertainty. May not get credit for both ECO 340 and ECO 346. Prerequisite(s): ECO 203.

### ECO 346. Intermediate Microeconomic Analysis. 3 Hours

Analysis of the theory of consumer behavior, production theory, equilibrium of the firm, price determination in various market structures, distribution of income, allocation of resources, and welfare economics. May not get credit for both ECO 346 and ECO 340. Prerequisite(s): ECO 203.

### ECO 347. Intermediate Macroeconomic Analysis. 3 Hours

National income accounting and the determination of the level of income and employment; classical, Keynesian, and post-Keynesian models; private, government, and foreign sectors; theories of inflation and economic growth. Prerequisite(s): ECO 204; ECO 203 .

### ECO 390. Antitrust Economics. 3 Hours

Study of how economic analysis has been applied in the interpretation of the antitrust statutes. Examines major anti-trust laws and relevant case law; reviews economic theories of market behavior. Prerequisite(s): ECO 203.

### ECO 410. Business & Economic Forecasting. 3 Hours

Forecasting techniques, including ARIMA time series models, econometric models, moving averages, exponential smoothing, and time series decomposition, are used to forecast business and economic variables. Data sources, selection of appropriate forecasting tools and models, and evaluation of forecast results are studied. Prerequisite(s): ECO 203, ECO 204; Statistics (DSC 211 or MTH 207 or MTH 367 or MTH 412).

**ECO 415. Game Theory with Business Applications. 3 Hours**

Introductory course in strategic decision making; provides a thorough discussion of the basic techniques of applied game theory and of systematic thinking in making business decisions. Among the topics covered with applications to business are equilibrium strategies, understanding situations involving conflict and cooperation, auction design and bidding strategy, and bargaining and negotiations. Prerequisite(s): ECO 203.

**ECO 435. Economics of the Environment. 3 Hours**

Introduction to the economics of the global environment including an analysis of market failure as a cause of environmental degradation. Topics covered include cost-benefits analysis, criteria for public investment, regulation of the environment, and the sustainable global environment. Prerequisite(s): ECO 203.

**ECO 441. Econometrics. 3 Hours**

Training in the art of making economic measurements from empirical data using regression analysis as the principle tool; use of computer software to estimate and test regression equations; interpretation of results using statistical inference. Prerequisite(s): ECO 203, ECO 204, [one of the following DSC 211, MTH 207, MTH 367, or MTH 412].

**ECO 442. Money & Banking. 3 Hours**

Principles of money and monetary systems; commercial banking and the role of the Federal Reserve System; monetary theory and policy; the mechanism of international payments. Prerequisite(s): ECO 203, ECO 204.

**ECO 445. Public Finance. 3 Hours**

The economic aspects of government finance at the local, state, and especially the national level; the behavioral effects of various taxes, efficiency in spending, the changing role of the U.S. government, fiscal policy, and intergovernmental revenue and expenditure programs; emphasis on relating analytical tools to current developments. Prerequisite(s): ECO 203, ECO 204.

**ECO 460. Economic Development & Growth. 3 Hours**

Study of various dynamic economic theories of growth and structural change; the role of particular factors of production and related noneconomic variables in the development process, primarily, though not exclusively, of Third World nations. Prerequisite(s): ECO 203, ECO 204.

**ECO 460H. Economic Development & Growth. 3 Hours**

Study of various dynamic economic theories of growth and structural change; the role of particular factors of production and related noneconomic variables in the development process, primarily, though not exclusively, of Third World nations. Prerequisite(s): ECO 203, ECO 204.

**ECO 461. International Economics. 3 Hours**

Major issues surrounding international trade and finance, the economic interdependence of nations and businesses, essential theoretical and empirical tools necessary to monitor and analyze international economic phenomena, and the application of these tools to contemporary business problems and issues. Prerequisite(s): ECO 203, ECO 204.

**ECO 471. Labor Economics. 3 Hours**

Theory of labor supply and demand, human capital theory, and the process by which wages are determined in various factor markets; applications to topics of unemployment, unions, migration, discrimination, and skill differentials. Prerequisite(s): ECO 203, ECO 204.

**ECO 480. Sports Economics. 3 Hours**

The application of economic analysis to the sports industry. Examines demand and efficiency in the product market; the labor market for professional athletes and mechanisms for restricting competition in that market; problems in achieving an efficient allocation of resources in the sports industry. Prerequisite(s): ECO 203.

**ECO 480H. Sports Economics. 3 Hours**

The application of economic analysis to the sports industry. Examines demand and efficiency in the product market; the labor market for professional athletes and mechanisms for restricting competition in that market; problems in achieving an efficient allocation of resources in the sports industry. Prerequisite(s): ECO 203; (DSC 211 or MTH 207) or equivalent.

**ECO 485. Urban & Regional Economics. 3 Hours**

Treatment of certain theoretical concepts such as location theory and theories of land use and land rent; an economic interpretation for the existence of cities; applying economic analysis to the problems of traffic congestion, pollution, race, poverty, and urban sprawl. Prerequisite(s): ECO 203.

**ECO 488. Production Economics & Performance Evaluation. 3 Hours**

Intermediate course in theoretical and applied microeconomic production theory; provides a thorough discussion of the basic techniques of applied production theory and performance evaluation of decision making units. Topics include returns to scale, technical and allocative efficiency, benchmarking, environmental costs, and programming. Prerequisite(s): ECO 203.

**ECO 490. Senior Seminar in Applied Economics. 3 Hours**

Economic analysis applied in an area of topical interest chosen by the instructor; includes the application of theoretical, mathematical, and statistical methods mastered in previous economics courses. This capstone course provides students an opportunity to extend their proficiency in economic analysis through application and discussion in a small group setting. Typically offered during the spring semester. Economics or Business Economics majors only. Prerequisite(s): Twelve semester hours in Economics.

**ECO 491H. Honors Thesis. 3 Hours**

Selection, design, investigation, and completion of an independent original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of the director of the program and the departmental chairperson.

**ECO 492H. Honors Thesis. 3 Hours**

Selection, design, investigation, and completion of an independent original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of the director of the program and the departmental chairperson.

**ECO 494. Seminar. 3 Hours**

Subject varies from time to time. May be taken more than once if topic changes. Prerequisites to be announced.

**ECO 496. Cooperative Education. 3 Hours**

Optional full-time work period off campus alternating with study period on campus. (See Chapter X; consult Cooperative Education Office for details.) Does not count toward economics major. Permission of chairperson required. Economics or Business Economics majors only. Prerequisite(s): Permission of department chairperson.

**ECO 497. Internship for General Elective Credit. 1-3 Hours**

Practical work experience associated with career development and career exploration relating to the student's major. Permission of the department chair or designee required. Does not replace economics courses for the economics major. Economics or Business Economics majors only. Prerequisite(s): Forty-five semester hours of credit.

**ECO 498. Independent Study in Economics. 1-6 Hours**

Directed readings and research in selected fields of economics. The number of semester hours will depend on the amount of work chosen. The course will involve periodic discussions with faculty and other students in the course. May be taken more than once for additional credit. Prerequisite(s): 3.0 GPA in economics with a minimum of nine semester hours in economics; nomination by faculty; permission of the department chairperson.

## English

Major:

- Bachelor of Arts, English (p. 165)

Minor:

- English (p. 166)

The University requirement in English composition is satisfied by the completion of (or ENG 100A and ENG 100B), ENG 200 or ENG 200H or ASI 120. Completing this requirement is a prerequisite for most other English courses. For placement information, see Composition Competencies in the Degree Requirements section. For additional details, consult the department chairperson or the director of writing programs.

Students majoring in English must complete at least 36 semester hours of English courses, including first-year composition, and at least 24 semester hours at the 300/400 level.

A minor in English consists of 12 semester hours beyond the composition requirement.

Students in B.A. programs can pursue State of Ohio teacher licensing in Integrated Language Arts through the dual-degree B.A. and B.S.E. program conducted in conjunction with the Department of Teacher Education in the School of Education and Health Sciences. Candidates must meet set standards for admission to this program, which must be verified by the Transfer Officer in the Office of the Dean, School of Education and Allied Professions. For further information, consult the Department of English chairperson.

The English department awards a writing certificate to students who achieve a 3.0 grade-point average in 18 semester hours of approved writing and writing-related courses, including at least 12 semester hours of upper-divisional (300-400) courses, and who successfully complete an approved writing portfolio and an assigned, impromptu writing task. The English department also offers a writing internship program. For details on these advanced writing opportunities, consult the department chairperson.

### Faculty

R. Andrew Slade, Chairperson  
Tereza Szeghi, Director of Graduate Studies  
Laura Vorachek, Director of Undergraduate Studies  
Ann Biswas, Director of Writing Programs

Professors Emeriti: August, Henninger, Labadie, L. Marre, H. Martin, Means, Murphy, Palumbo, Patrouch, Stockum, Youngkin  
Professors: Farrelly, Hughes, Kimbrough, K. Marre, McCombe, Pici, Strain, Wilhoit

Associate Professors: Bardine, Boehnlein, Carrillo, Krummel, Morgan, Potter, Slade, Trollinger, Vorachek

Assistant Professors: Esseili, Friedlander, Haan, Li, Naruse, Szeghi, Thomas

Lecturers: Adams, Biswas, Burnside, Butler, DeAloia, Doench, Getrost, Hohman, Keane-Sexton, MacKay, MacLeod, E. Martin, Patterson, Taaffe

## Bachelor of Arts with a major in English (eng) Minimum 124 Hours

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
HST 103 West and the World	
REL 103 Introduction to Religious and Theological Studies	
PHL 103 Intro To Philosophy	
ENG 100 Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>	0-3
ENG 200 Writing Seminar II	
Oral Communication	3
CMM 100 Principles of Oral Communication	
Mathematics	3
Social Science	3
Arts	3
Natural Sciences <sup>4</sup>	7
Crossing Boundaries	variable credit
Faith Traditions	
Practical Ethical Action	
Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

### Liberal Studies Curriculum

Creative and Performing Arts (May include CAP Arts)	3
L2 Proficiency (Proficiency in a language other than English)	0-11
Mathematics, excluding MTH 205 (Satisfies CAP Mathematics)	3
Natural Sciences (Satisfies CAP Natural Science)	11
Social Sciences (Includes CAP Social Science)	12



<b>Major Requirements</b> <sup>1, 2, 3</sup>		36
ENG 100 & ENG 200 or ENG 200H or ASI 120	Writing Seminar I and Writing Seminar II Writing Seminar II The Development of Western Culture in a Global Context	
ENG 300	Literary Analysis & Research - Poetry	
ENG 301	Survey of Early English Literature	
ENG 302	Survey of Later British Literature	
ENG 305	Survey of American Literature	
ENG 362	Shakespeare	
ENG 476 or ENG 488 or ENG 489	Composition Theory <sup>4</sup> Literary Theory Rhetorical Criticism	
ENG 490	Research Seminar-Literature (Satisfies CAP Major Capstone)	
Select one writing course (300/400 level)		3
ENG electives		6-12
<b>Breadth</b>		
ASI 150	Introduction to the University Experience	1
Total Hours to total at least		124

- <sup>1</sup> Satisfies CAP First and Second-Year Writing Seminar.
- <sup>2</sup> May include CAP Arts.
- <sup>3</sup> ENG 100A and 100B together will satisfy the requirement of 3 semester hours of ENG 100. ASI 120 satisfies the requirement of 3 semester hours of ENG 200H. Students exempt from ENG 200H due to ACT/SAT scores still need to complete 36 semester hours for the major.
- <sup>4</sup> ENG 476 is recommended for students who plan to teach English and writing; ENG 488 is recommended for students who plan to pursue graduate studies in literature; ENG 489 is appropriate as a primary theory course for students who do not plan to teach and/or those who may pursue law or graduate study in rhetoric-related fields.

## Minor in English (eng)

### English

Select four ENG courses (300/400 level) <sup>1</sup>	12
Total Hours	12

- <sup>1</sup> In addition to the composition requirement.

### First Year

Fall	Hours Spring	Hours
ASI 150	1 ASI 120	8
ASI 110	7 MTH 114	3
PSY 101	3 Language 141	4
Language 101	4	
	<b>15</b>	<b>15</b>

### Second Year

Fall	Hours Spring	Hours
SCI 190 & 190L	4 ENG 362	3

Language contextual course	3 PSY at 300 or 400 level	3
ENG 300	3 SCI 210 or 220	3
Arts Study	3 SCI 210L or 220L	1
Social Science Intro	3 CMM 100 (CAP Communication)	3
	ENG 301	3
	<b>16</b>	<b>16</b>

### Third Year

Fall	Hours Spring	Hours
ENG 305	3 ENG 302	3
General elective	3 ENG writing course	3
Inquiry	3 Social Science elective	3
SCI 230 or 240	3 Faith Tradition	3
General elective	3 General elective	3
Practical Ethical Action	3	
	<b>18</b>	<b>15</b>

### Fourth Year

Fall	Hours Spring	Hours
ENG 488	3 ENG 490	3
Advanced PHL or REL	3 ENG elective	3
ENG elective	3 Diversity and Social Justice	3
Integrative	3 General elective (optional)	3
ENG elective	3 General elective (optional)	3
	<b>15</b>	<b>15</b>

Total credit hours: 125

## Courses

### ENG 100. Writing Seminar I. 3 Hours

Introductory composition course focused on personal and academic literacies, with an emphasis on expository writing. Instruction and practice in developing college-level reading, writing, research, and critical thinking skills. Emphasis is on a process approach to writing effective academic prose. Students must pass the course with a grade of C- or higher to satisfy College of Arts and Sciences' composition competency requirement.

### ENG 100A. Writing Seminar 1A. 2 Hours

First half of two-semester introductory composition course sequence focused on personal and academic literacies, with an emphasis on expository writing. Instruction and practice in developing college-level reading, writing, research, and critical thinking skills. Emphasis is on a process approach to writing effective academic prose. Students must pass the course with a grade of C- or higher to satisfy College of Arts and Sciences' composition competency requirement. Prerequisite(s): Placement as determined by the Office of the Dean.

### ENG 100B. Writing Seminar 1B. 2 Hours

Second half of year-long introductory composition course focused on personal and academic literacies, with an emphasis on expository writing. Instruction and practice in developing college-level reading, writing, research, and critical thinking skills. Emphasis is on a process approach to writing effective academic prose. Students must pass the course with a grade of C- or higher to satisfy College of Arts and Sciences' composition competency requirement. Prerequisite(s): ENG 100A.

**ENG 101. College Composition I. 3 Hours**

Analysis of the processes of reading and writing aimed at the development and refinement of critical thinking skills, critical reading skills, and critical writing skills. Students must pass course with a grade of C- or higher to satisfy the University requirement in general reading and writing competencies.

**ENG 102. College Composition II. 3 Hours**

Study of appropriate rhetorical structures and styles for analytic, synthetic, and argumentative essays. Practice in developing critical reading and writing skills with an emphasis on writing from sources. Students must pass the course with a grade of C- or higher to satisfy the University requirement in general reading and writing competencies. Prerequisite(s): ENG 101.

**ENG 151. Introduction to Literature. 3 Hours**

Critical study of literary forms - fiction, drama, and poetry - representative of various eras and cultures. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 101) or ASI 110) or equivalent. ENG 100 or ENG 100B may be taken as a corequisite.

**ENG 198. English Scholars' Seminar. 3 Hours**

Study and seminar discussion of selected literary masterworks and appropriate criticism thereof, with equal emphasis on composition. Open by permission only to first-year students in the Berry Scholars Program. Students must pass the course with a grade of C- or higher to satisfy the University requirement in general reading and writing competencies.

**ENG 200. Writing Seminar II. 3 Hours**

Variable topic composition course focused on academic discourse, research, and argumentation. Instruction and practice in developing reading, writing, and research skills introduced in ENG 100 and employed across the curriculum. Emphasis on rhetorical analysis and a process approach to writing effective academic arguments. Students must pass the course with a grade of C- or higher to satisfy College of Arts and Sciences' composition competency requirement. Prerequisite(s): ENG 100, or (ENG 100A and ENG 100B) or ENG 101, and sophomore status, or placement as determined by the Dean's Office.

**ENG 200H. Writing Seminar II. 3 Hours**

Variable theme composition course focused on academic discourse, research, and argumentation. Instruction and practice in developing reading, writing, and research skills introduced in ENG 100 and employed across the curriculum. Emphasis is on rhetorical analysis and a process approach to writing effective academic arguments. Students must pass the course with a grade of C- or higher to satisfy College of Arts and Sciences' composition competency requirement. Prerequisite(s): Placement as determined by the Office of the Dean.

**ENG 203. Major British Writers. 3 Hours**

Study of four or five writers representative of the principal periods in English literature. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 204. Major American Writers. 3 Hours**

Study of four or five writers representative of the principal periods in American literature. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 205. Major World Writers. 3 Hours**

Study (in translation) of four or five writers representative of the principal periods in (chiefly Western world) literature, exclusive of English and American literature. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 210. Poetry. 3 Hours**

Study of representative examples of a major literary genre.

Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 220. Foundations of Textual Analysis & Research. 3 Hours**

Introduction to the skills and habits of reading, writing, textual analysis and research that are central to the discipline of English. Prerequisite(s): ENG 100 or ENG 100B or ENG 200H or ASI 110 or equivalent.

**ENG 230. Topics in Literature. 1-6 Hours**

Exploration of varying approaches to the study of literature. Can be repeated under special circumstances. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 242. Sophomore Honors. 3 Hours**

Seminar in which selected works from the literature of Western civilization are studied. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 270. Reading & Writing in the American University. 4 Hours**

Provides students who are English language learners with an understanding of rhetorical principles and the conventions of Western academic literacy as well as competence in applying those principles and conventions for success as writers in an American university. Prerequisite(s): Permission of department chairperson.

**ENG 271. Technical Writing Laboratory. 2 Hours**

Designed to complement Engineering Technology courses by analyzing representative technical reports and documents and by providing guidance in planning, drafting, and revising writing assignments. Its focus is on the discipline-specific types of writing in the professional technical/engineering fields including laboratory reports, correspondence, technical descriptions, specifications, and proposals. Prerequisite(s): ENG 270.

**ENG 271L. Technical Writing Laboratory. 2 Hours**

Designed to complement Engineering Technology courses by analyzing representative technical reports and documents and by providing guidance in planning, drafting, and revising writing assignments. Its focus is on the discipline-specific types of writing in the professional technical/engineering fields including laboratory reports, correspondence, technical descriptions, specifications, and proposals. Prerequisite(s): ENG 270.

**ENG 272. Writing & Research. 3 Hours**

Study and practice of research methods commonly required to complete writing assignments across the curriculum. Formulation of research questions, use of appropriate methods to gather data, analysis of information, and creation of effective written documents. Prerequisite(s): ((ENG 200 or ENG 200H) or ASI 120) or equivalent.

**ENG 280. Introduction to Creative Writing. 3 Hours**

Introduction to analyzing and writing poetry, short fiction, and creative non-fiction. Prerequisite(s): (ENG 100 or ENG 100B or ENG 200H) or ASI 110.

**ENG 282. Introduction to Writing Poetry. 3 Hours**

Beginning course in analyzing and writing poetry. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 284. Introduction to Writing Fiction. 3 Hours**

Beginning course in analyzing and writing short fiction. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 286. Introduction to Writing Drama. 3 Hours**

Beginning course in analyzing and writing short plays. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 300. Literary Analysis & Research - Poetry. 3 Hours**

Detailed analysis of selected poems, with attention to their use of traditional forms and conventions, combined with training in standard methods of interpretation and research. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 301. Survey of Early English Literature. 3 Hours**

Survey of English literature from the Medieval period to the end of the eighteenth century. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 302. Survey of Later English. 3 Hours**

Survey of English literature from the beginning of the Romantic period to the present. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 302H. Survey of Later English. 3 Hours**

Survey of English literature from the beginning of the Romantic period to the present. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 303. Survey of Early American Lit. 3 Hours**

Survey of American literature from the Colonial period to 1865. Prerequisite(s): ENG 100 or ENG 100B or ENG 200H or ASI 110 or equivalent.

**ENG 304. Survey of Later American Lit. 3 Hours**

Survey of American literature from 1865 to the present. Prerequisite(s): ENG 100 or ENG 100B or ENG 200H or ASI 110 or equivalent.

**ENG 305. Survey of American Literature. 3 Hours**

Survey of American literature from the Colonial period to the present. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 306. Survey of Continental Literature. 3 Hours**

Survey of continental European literature from Homer to the present. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 308. Intermediate Poetry Workshop. 3 Hours**

Intensive practice in the writing of poems. Prerequisite(s): ENG 282 or permission of department chairperson.

**ENG 310. Intermediate Fiction Workshop. 3 Hours**

Intensive practice in the writing of fiction. Prerequisite(s): ENG 284 or permission of department chairperson.

**ENG 312. Advanced Writing of Drama. 3 Hours**

Intensive practice in the writing of plays. Prerequisite(s): ENG 286 or permission of department chairperson.

**ENG 315. Creative Nonfiction. 3 Hours**

Study, analysis, and writing of a number of creative nonfiction forms, including memoir, personal essay, biography, opinion essay, and weblogs. Focus on writing process, rhetorical awareness, style, and voice in expressive writing. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 316. Elements of Style. 3 Hours**

Study of stylistic options available to all writers. Examination of and practice in adapting writing style for various audiences and purposes, altering style to achieve desired effects, and developing a distinctive written voice. Prerequisite(s): ((ENG 200 or ENG 200H) or ASI 120) or equivalent.

**ENG 316H. Elements of Style. 3 Hours**

Study of stylistic options available to all writers. Examination of and practice in adapting writing style for various audiences and purposes, altering style to achieve desired effects, and developing a distinctive written voice. Prerequisite(s): ((ENG 200 or ENG 200H) or ASI 120) or equivalent.

**ENG 317. Contemporary Poetry. 3 Hours**

Study of selected poems by recent writers. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 319. Contemporary Fiction. 3 Hours**

Study of selected novels and short fiction by recent writers. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 320. Contemporary Drama. 3 Hours**

Study of selected plays to illustrate major tendencies of modern drama. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 321. Reading Popular Music. 3 Hours**

A focus on popular music texts and scholarly approaches to these texts drawn from a wide range of academic disciplines. Assignments and in-class activities will emphasize critical reading and writing skills as applied to both the popular music texts and the secondary sources which analyze them. Course may be repeated as topics change. Prerequisite(s): ENG 200 or ENG 200H or ASI 120.

**ENG 322. Masterpieces of World Literature. 3 Hours**

Intensive study of major literary works representative of various cultures. Works are studied in translation, although an English language work or two may be included for appropriate comparison. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 322H. Masterpieces of World Literature. 3 Hours**

Intensive study of major literary works representative of various cultures. Works are studied in translation, although an English language work or two may be included for appropriate comparison. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 323. Literature of the Christian Tradition. 3 Hours**

Study of literary works that form part of the Christian religious tradition. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 324. The Novel. 3 Hours**

Consideration of selected novels to illustrate various fictional modes. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 325. Science Fiction. 3 Hours**

Survey of science fiction with detailed analysis of selected novels and short fiction. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 326. Sport & Literature. 3 Hours**

An historical approach to analyzing the function of sport in society and literature, from Greek times to contemporary times. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 326H. Sport & Literature. 3 Hours**

An historical approach to analyzing the function of sport in society and literature, from Greek times to contemporary times. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 327. Studies in Popular Fiction. 3 Hours**

Analysis of selected artifacts of popular culture with reference to serious literature. May be repeated as topics change. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 328. American Nobel Authors. 3 Hours**

Analysis and discussion of the works of several American Nobel Prize winners in the field of literature. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 329. Short Story. 3 Hours**

Study of the techniques employed in the writing of the short story.

Analysis of various models of the short story. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 330. Development of Drama. 3 Hours**

Study of the historical development of the drama from its beginnings to the nineteenth century. Analysis of plays from each significant period.

Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 331. Studies in Film. 3 Hours**

Analysis of selected films to show developments in film technique or criticism. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 332. Studies in Literature & Film. 3 Hours**

Studies in literary texts and the film treatments of those texts. May be repeated as topics change. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 332H. Studies in Literature & Film. 3 Hours**

Studies in literary texts and the film treatments of those texts. May be repeated as topics change. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 333. Images of Women in Literature. 3 Hours**

Examination of significant literary works that present and respond to images of women, with critical attention to social and historical context, including application of feminist critical approaches. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 333H. Images of Women in Literature. 3 Hours**

Examination of significant literary works that present and respond to images of women, with critical attention to social and historical context, including application of feminist critical approaches. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 334. Modern Men -- Images. 3 Hours**

Critical examination of significant literary works that portray males in traditional and non-traditional roles. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 335. African American Literature. 3 Hours**

Study of African American writers and their oral and literary traditions. Emphasis on issues such as race, gender, and religion. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 336. Gender in Fiction. 3 Hours**

Study of major works of American and British male and female authors from different periods, analyzing the authors, their principal characters, themes, and narrative technique as they reflect different aspects of the issue of gender in literature. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 336H. Gender in Fiction. 3 Hours**

Study of major works of American and British male and female authors from different periods, analyzing the authors, their principal characters, themes, and narrative technique as they reflect different aspects of the issue of gender in literature. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 337. Studies in Folklore. 3 Hours**

Selected studies in American and/or world folklore. May be repeated as topics change. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 338. Images of Business. 3 Hours**

Examination of the modern world of work, the image of the business 'professional', and the influence of organization on global society and values as these themes are revealed primarily in modern literature. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 339. American Indian Literature. 3 Hours**

Study of American Indian writers and their oral and literary traditions. Emphasis on such issues as race, gender, and religion. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 340. The Prison in Literature. 3 Hours**

Survey of prison literature from the rise of the modern prison in the late eighteenth century through the contemporary period. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 341. Asian-American Literature. 3 Hours**

Study of Asian American writers and their literary traditions. Emphasis on issues of race, gender, and class. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 342. Literature & Environment. 3 Hours**

Examination of nature and environment in literature, focusing on literary representations of nature; nature writing; fiction and ecocriticism; the environment and the literary imagination. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 343. Literature of the Fifties. 3 Hours**

Study of three identifiable cultures of the 1950s in America that were concerned with disillusionment, conformity, alienation, and artistic standards in literature: African-American, Beat, and Jewish writers. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 344. Literature of the Sixties. 3 Hours**

Examination of the Sixties from the perspectives of cultural and literary studies. To this end, it focuses on major works of fiction, essays, New Journalism, and film. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 345. Colonial & Postcolonial Literature. 3 Hours**

Examination of significant literary works that reveal the diversity of human cultures shaped by colonial and postcolonial contexts. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 345H. Colonial & Postcolonial Literature. 3 Hours**

Examination of significant literary works that reveal the diversity of human cultures shaped by colonial and postcolonial contexts. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.



**ENG 346. Literature & Human Rights. 3 Hours**

Study of works of literature that address human rights concerns, supplemented with study of foundational philosophical, theological, and political texts that address the meaning and origin of human rights. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 347. Young Adult Literature. 3 Hours**

Critical study of literature written for young adults, including an analysis of the historical trends, debates, and issues in the field. Prerequisite(s): ENG 100 or 100B or 200H or ASI 110.

**ENG 348. Modern Irish Literature. 3 Hours**

Consideration principally of the Irish literary revival of the late nineteenth and early twentieth centuries with appropriate background material. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 350. European Literature of Antiquity. 3 Hours**

Study of significant works from the Old Testament and Greek, Roman, English, Irish, and/or Scandinavian writers. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 351. European Literature of Middle Ages. 3 Hours**

Study of selected literary masterpieces of western civilization in the Middle Ages. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 353. Literature of the Renaissance. 3 Hours**

Study of selected literary masterpieces from England and the Continent that illustrate the culture and ideas of the Renaissance. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 354. Literature of the Enlightenment. 3 Hours**

Study of selected English and European literature from the Age of Reason. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 355. Literature of the Romantic Age. 3 Hours**

Study of the Romantic Revolution as illustrated in representative writings of English and European authors. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 356. European Literature of the 19th Century. 3 Hours**

Study of representative masterpieces from the literature of England and the Continent during the nineteenth century. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 357. European Literature of the Early 20th Century. 3 Hours**

Study of significant English and European literature that illustrates the ideas and culture of the early modern period. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 358. Contemporary Literature of Europe. 3 Hours**

Study of selected western European literature that illustrates the ideas and culture of the present age. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 360. US Latina/Latino Literature. 3 Hours**

Study of U.S. Latina/o authors writing in English and their literary traditions. Emphasis on issues of race, gender, and class. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 362. Shakespeare. 3 Hours**

Study of selected plays and poems of Shakespeare. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 362H. Shakespeare. 3 Hours**

Study of selected plays and poems of Shakespeare. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 362L. Shakespeare Performance Laboratory. 1 Hour**

Study of Shakespearean performances through films, video tapes, and recordings. Three hours a week. Students in 362L must have already taken or be registered for ENG 362 or an equivalent Shakespeare course. Corequisite(s): ENG 362 or equivalent Shakespeare course.

**ENG 363. Shakespeare's Worlds. 3 Hours**

Concentrated analysis of the various worlds created in Shakespeare's plays and their interconnection with and depiction of the major elements of the historical world of early modern England. In the process of this integrated analysis, the Historical Study and Arts Study domains will be respected and taught as separate disciplines. This course is cross-listed with HST 308.

**ENG 365. Studies in an Author. 3 Hours**

The study and analysis of a significant author's work, literary achievement and influence. May be repeated as topics change. Prerequisite(s): ENG 200 or ENG 200H or ASI 120.

**ENG 368. Introduction to Professional and Technical Writing. 3 Hours**

Examination of the histories, theories, processes, functions, and tools of writing in field-specific workplace contexts such as corporate, legal, medical, scientific, technical, and non-profit settings. Prerequisite(s): ENG 100 or ENG 100B or ENG 200H or ASI 110 or equivalent.

**ENG 369. Writing in Organizations. 3 Hours**

Intensive study and production of rhetorically effective texts for a variety of professional purposes and audiences. Emphasis on strategically employing technology and writing skills to analyze, create, and edit print and digital texts such as web documents, grant proposals, reports, newsletters, instructions, and other forms of internal and external communication reflective of current workplace practices. (English majors only). Prerequisite(s): ENG 220, ENG 368, English majors only.

**ENG 370. Report & Proposal Writing. 3 Hours**

Analysis and practice in effective report and proposal writing. Emphasis on employing appropriate rhetorical and technological tools to analyze, produce, and edit proposals and reports for both business and non-profit audiences. Prerequisite(s): ((ENG 200 or ENG 200H) or ASI 120) or equivalent; junior or senior standing.

**ENG 370H. Report & Proposal Writing. 3 Hours**

Analysis and practice in effective report and proposal writing. Emphasis on employing appropriate rhetorical and technological tools to analyze, produce, and edit proposals and reports for both business and non-profit audiences. Prerequisite(s): ((ENG 200 or ENG 200H) or ASI 120) or equivalent; junior or senior standing.

**ENG 371. Technical Communication. 3 Hours**

Study and practice of effective written communication in technical professions. Emphasis on rhetorical and technological tools and editing skills needed to analyze and create technical documents with written and visual elements. Prerequisite(s): ((ENG 200 or ENG 200H) or ASI 120) or equivalent; junior or senior standing.

**ENG 372. Business Communication. 3 Hours**

Study and practice in the principles and processes of effective written communication typically encountered in business and other professions. Focus on use of appropriate rhetorical and technological tools to analyze, write, and edit a range of texts including letters, memos, policies, procedures, job descriptions, resumes, performance reviews, reports, and proposals. Prerequisite(s): ((ENG 200 or ENG 200H) or ASI 120) or equivalent; junior or senior standing.

**ENG 373. Medical Writing. 3 Hours**

Intensive practice in reading and writing for the healthcare professions. Designed for pre-medicine, pre-dentistry, pre-veterinary, and pre-physical therapy students. Practice in research and workplace writing, uses of narrative in medicine, the personal essay, and MCAT essay. Prerequisite(s): ((ENG 200 or ENG 200H) or ASI 120) or equivalent; junior or senior standing.

**ENG 373H. Medical Writing. 3 Hours**

Intensive practice in reading and writing for the healthcare professions. Designed for pre-medicine, pre-dentistry, pre-veterinary, and pre-physical therapy students. Practice in research and workplace writing, uses of narrative in medicine, the personal essay, and MCAT essay. Prerequisite(s): ((ENG 200 or ENG 200H) or ASI 120) or equivalent; junior or senior standing.

**ENG 374. Visual Rhetoric. 3 Hours**

Exploration of theories of visual rhetoric and application of those theories to specific instances of visual rhetoric in culture and history. Prerequisite(s): ENG 200 or ENG 200H or ASI 120 or equivalent.

**ENG 375. Writing for the Web. 3 Hours**

Study of the theory and practice of writing rhetorically effective website content and producing websites. Focus on writing and editing effective web content that engages users. Prerequisite(s): ENG 200, ENG 200H, or ASI 120.

**ENG 376. Topics in Writing. 1-6 Hours**

Analysis of and practice in specific forms of writing. May be repeated as forms change. Prerequisite(s): ((ENG 200 or ENG 200H) or ASI 120) or equivalent.

**ENG 377. Writing in Social Contexts. 3 Hours**

Examination of the role writing plays in establishing, maintaining, and regulating social relationships in a specified social context. Involves rhetorical analysis of discourse conventions common to those contexts, original research of writing practices in those contexts, and practice writing within those contexts with attention to audience, genre, and style. Prerequisite(s): ENG 100 or ENG 200H or ASI 110.

**ENG 378. Professional & Technical Writing. 3 Hours**

Professional and Technical Writing.

**ENG 379. Rhetoric of Science. 3 Hours**

Introduction to the role rhetoric and language play in science writing. Focus on the rhetorical analysis of public policy controversies involving science and technology and the role rhetoric plays in the public's understanding of these issues. Prerequisite(s): ((ENG 200 or ENG 200H) or ASI 120) or equivalent.

**ENG 380. Studies in Literature. 1-6 Hours**

Study of special topics or themes in literature. May be repeated as topics change. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 380H. Studies in Literature. 1-6 Hours**

Study of special topics or themes in literature. May be repeated as topics change. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 382. Mozart's Operas. 3 Hours**

An interdisciplinary survey of Mozart's operas - German and Italian, serious and comic. Class discussions will be supplemented by extensive listening and/or viewing of recorded performances and, when possible, attendance at live performances. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 383. Tragic Dilemma. 3 Hours**

Examination of tragedy from ancient times to modern times, with emphasis on both the form(s) of tragedy and the tragic vision of life. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 383H. Tragic Dilemma. 3 Hours****ENG 384. Christianity & Modern Poetry. 3 Hours**

Study of selected poets from the modern period whose work draws from the major literary, intellectual, cultural, and theological traditions of Christianity. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 385. Religion & Literature. 3 Hours**

Interdisciplinary study of literature and religion, seeking the sacred in the secular, discussing the doctrines of humans and of God in major writings, especially those of current collegiate interest. Prerequisite(s): ((ENG 100 or ENG 100B or ENG 200 or ENG 200H) or ASI 110) or equivalent.

**ENG 386. Genre in Writing. 3 Hours**

Survey of various approaches to the study of genre, with emphasis on analysis and production of texts within academic and/or professional genres. Prerequisite(s): ENG 220.

**ENG 387. Literature & Ethics. 3 Hours**

No description available.

**ENG 388. Introduction to Literary Theory. 3 Hours**

Introduction to Literary Theory, its historical development, rhetorical and argumentative strategies, and practice. Prerequisite(s): ENG 220.

**ENG 389. Introduction to Poetics and Narrative Theory. 3 Hours**

Examination of a variety of poetic and narrative theories and their application to the study of creative writing. Prerequisite(s): ENG 220 or permission of department chairperson.

**ENG 390. Introduction to Rhetorical Theory. 3 Hours**

Examination of a variety of rhetorical theories from classical, modern, and contemporary times. Students explore the limits and possibilities of these theories for explaining persuasion, identification, and affect across texts aimed at diverse audiences. Prerequisite(s): ENG 220 or permission of the department chairperson.

**ENG 391. Introduction to Composition Theory. 3 Hours**

Study of the principal current theories of composition, with application to the teaching and evaluating of writing. Prerequisite(s): ENG 220 or permission of the department chairperson.

**ENG 393. Approaches to Literature for Middle and High School. 3 Hours**

The theory and practice of introducing literature and language arts to a diverse middle and high school student population. Strategies for planning and implementing textual interpretation techniques appropriate to secondary education settings. The investigation and use of literary analysis, critical theory, and approaches to writing about multiple genres of literature. Prerequisite(s): (ENG 200 or ENG 200H) or ASI 120 or equivalent.

**ENG 395. Junior Honors Tutorial. 3 Hours**

Independent directed study on special topics for selected students. May be repeated as topic or instructor changes. Prerequisite(s): ((ENG 200 or ENG 200H) or ASI 120) or equivalent; junior standing; permission of instructor.

**ENG 405. Chaucer. 3 Hours**

Study of Chaucer's life, world, language, and literary achievement, concentrating on *The Canterbury Tales* (in Middle English). Prerequisite(s): 200- or 300-level English course excluding ENG 200, ENG 200H.

**ENG 407. Medieval English Literature. 3 Hours**

Study of the dominant types in the literature of England from the beginning to 1500. Prerequisite(s): 200- or 300-level English course excluding ENG 200, ENG 200H.

**ENG 410. Early Renaissance Literature. 3 Hours**

Survey of the literature of the sixteenth century from Thomas More to Sidney and Spenser. Prerequisite(s): 200- or 300-level English course excluding ENG 200, ENG 200H.

**ENG 414. Later Renaissance Literature. 3 Hours**

Survey of the literature of the early seventeenth century from Bacon, Jonson, and Donne to Marvell, exclusive of Milton. Prerequisite(s): 200- or 300-level English course excluding ENG 200, ENG 200H.

**ENG 431. Milton. 3 Hours**

Study of the major and minor poems and selected prose of Milton. Prerequisite(s): 200- or 300-level English course excluding ENG 200, ENG 200H.

**ENG 433. Studies in Neo-Classical Literature. 3 Hours**

Study of English literature from Dryden to Johnson. May be repeated as topics change. Prerequisite(s): 200- or 300-level English course excluding ENG 200, ENG 200H.

**ENG 438. English Romanticism. 3 Hours**

Study of the major poets and critics of the Romantic Age. Prerequisite(s): 200- or 300-level English course excluding ENG 200, ENG 200H.

**ENG 444. Studies in 19th Century English Literature. 3 Hours**

Study of English literature in the nineteenth century. May be repeated as topics change. Prerequisite(s): 200- or 300-level English course excluding ENG 200, ENG 200H.

**ENG 448. 20th Century British Literature. 3 Hours**

Study of significant developments in modern British literature. Prerequisite(s): 200- or 300-level English course excluding ENG 200, ENG 200H.

**ENG 451. American Romanticism. 3 Hours**

Study of significant developments in American literature of the mid-19th century. Prerequisite(s): 200- or 300-level English course excluding ENG 200, ENG 200H.

**ENG 453. American Realism & Naturalism. 3 Hours**

Study of representative writers from the post-Civil War period in American literature. Prerequisite(s): 200- or 300-level English course excluding ENG 200, ENG 200H.

**ENG 455. 20th Century American Literature. 3 Hours**

Study of significant developments in American literature of the twentieth century. Prerequisite(s): 200- or 300-level English course excluding ENG 200, ENG 200H.

**ENG 460. Advanced Poetry Workshop. 3 Hours**

Intensive practice in writing of poetry and production of a chapbook. Prerequisite(s): ENG 308.

**ENG 462. Advanced Fiction Workshop. 3 Hours**

Intensive practice in writing of fiction and production of a novella or short story cycle. Prerequisite(s): ENG 310.

**ENG 466. TESOL Methods for Teaching English Language Learners. 3 Hours**

Introduction to key concepts in Teaching English to Speakers of Other Languages.. Theoretical perspectives on second language (ESL) and literacy instruction will be interwoven with practical techniques for classroom instruction. Students will investigate approaches to teaching the four skills of English (reading, writing, listening, speaking) across varying contexts and proficiency levels. Prerequisite(s): ENG 200 or ENG 200H or ASI 120; and junior or senior standing or permission of Department chairperson.

**ENG 468. Introduction to Linguistics. 3 Hours**

Introduction to the basic concepts and procedures of general linguistics, including language description, history, variation, theory, and acquisition. Prerequisite(s): ((ENG 102 or ENG 200 or ENG 200H) or ASI 120) or equivalent; junior or senior standing or permission of department chairperson.

**ENG 470. History of English. 3 Hours**

Study of stages in the development of the English language and of influences shaping its development from the beginning to the present. Prerequisite(s): ((ENG 102 or ENG 200 or ENG 200H) or ASI 120) or equivalent; junior or senior standing or permission of department chairperson.

**ENG 470H. History of English. 3 Hours**

Study of stages in the development of the English language and of influences shaping its development from the beginning to the present. Prerequisite(s): ((ENG 102 or ENG 200 or ENG 200H) or ASI 120) or equivalent; junior or senior standing or permission of department chairperson.

**ENG 472. The Structure of English. 3 Hours**

Study of the grammatical structure of modern English from traditional and modern linguistic points of view. Prerequisite(s): ((ENG 102 or ENG 200 or ENG 200H) or ASI 120) or equivalent; junior or senior standing or permission of department chairperson.

**ENG 474. Argument and Style. 3 Hours**

Intensive study of argumentative writing with emphasis on different methods of argumentation and appropriate stylistic choices for each. Prerequisite(s): (ENG 200 or ENG 200H) or ASI 120.

**ENG 475. Usability in Technical Writing. 3 Hours**

Examination of theory and methods of usability testing in technical writing. Students survey approaches to usability testing in print and online technical writing. Students plan, conduct, and analyze usability tests for selected print and digital texts. Students analyze and design test plans, conduct testing sessions, write reports, and present recommendations. Prerequisite(s): (ENG 200 or ENG 200H or ASI 120) and ENG 368.

**ENG 476. Composition Theory. 3 Hours**

Study of the principal current theories of composition, with application to the teaching and evaluating of writing. Prerequisite(s): ENG 316 or permission of instructor.

**ENG 477H. Honors Thesis. 3 Hours**

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

**ENG 478H. Honors Thesis. 3 Hours**

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved ENG 477; approval of University Honors Program.

**ENG 480. Independent Study. 1-6 Hours**

Individual investigations of special topics under faculty direction. May be repeated under special circumstances. Prerequisite(s): At least fifteen semester hours of English; permission of department chairperson.

**ENG 481. Topics in English Studies. 1-6 Hours**

Systematic study of a specialized topic in English Studies. Prerequisite(s): 200- or 300-level English course excluding ENG 200, ENG 200H.

**ENG 482. Modern Poetry. 3 Hours**

Concentrated, advanced study in the development of modern poetry, both English and American. Prerequisite(s): 200- or 300-level English course excluding ENG 200, ENG 200H.

**ENG 485. Internship in Writing. 1-6 Hours**

Application of writing skills to specific projects of an approved organization. Practical and professional experience offered to juniors and seniors (particularly English majors and minors) as a supplement to the writing curriculum. Option 2 grading only. Prerequisite(s): ENG 370, ENG 371, ENG 372; junior or senior standing; 2.5 cumulative GPA and at least 3.0 GPA in English courses; permission of Internship Coordinator.

**ENG 488. Literary Theory. 3 Hours**

Comparative critical reading of classical and modern theoretical texts and analysis of critical methodology. Prerequisite(s): 200- or 300-level English course excluding ENG 200, ENG 200H.

**ENG 489. Rhetorical Criticism. 3 Hours**

Study and practice of classical and contemporary rhetorical theories and techniques. Focus on writing rhetorical analyses of non-literary texts, including political discourse, advertising, scholarly essays, and visual images. Prerequisite(s): (ENG 272 or ENG 316) or permission of instructor; junior or senior standing.

**ENG 490. Research Seminar-Literature. 3 Hours**

Concentrated study of a topic designed to integrate selected aspects of literary history, critical approaches, and research skills developed by English majors in previous required courses. May be repeated as topics change. Prerequisite(s): (ENG 220 or 300) and (ENG 301 or 302 or 303 or 304 or 305) and (ENG 388 or 476 or 488 or 489) and (junior or senior standing or permission of department chairperson).

**ENG 495. Senior Honors Tutorial. 3 Hours**

Independent directed study on special topics for selected students. May be repeated as topic or instructor changes. Prerequisite(s): Permission of department chairperson.

**ENG 496. Research Seminar-Teaching. 3 Hours**

Examination of methods for teacher research in the field of English/Language Arts. Students will practice various methods and create research proposals for their capstone course project. Prerequisite(s): (ENG 220 or 300) and (ENG 301 or 302 or 303 or 304 or 305) and (ENG 391 or 476 or 488 or 489) and (ENG 393 or 466) and (junior or senior standing or permission of department chairperson).

**ENG 497. Research Seminar-Writing. 3 Hours**

Advanced study of one or more theories or research methodologies from the fields of creative writing, rhetoric and composition, or professional and technical writing and their application to an appropriate research question in the field. May be repeated as topic changes. Prerequisite(s): (ENG 220 or ENG 300) and (ENG 389 or ENG 390 or ENG 391 or ENG 476 or ENG 489) and (junior or senior standing or permission of department chairperson).

**ENG 498. Capstone I-Project. 3 Hours**

Part one of the capstone for English majors. Independent project (research or other form of scholarship) under the direction of an individual faculty mentor. English majors only. Prerequisite(s): ENG 490 or ENG 496 or ENG 497.

**ENG 499. Capstone II-Seminar. 0 Hours**

Part two of the English major capstone. Weekly seminar integrating the work of the capstone project (ENG 498) with students' past experiences and future goals. Students prepare their capstone projects for public presentation, present those projects in a public forum, and reflect upon the process and product of their work. Prerequisite(s): ENG 498.

## Family Development

The interdisciplinary minor in family development increases understanding of the meaning and dynamics of marriage and parenthood in contemporary society. It examines the family as a major institution affecting society and surveys the individual, social, and economic problems found within families. This background contributes to preparation for careers in areas such as social work, psychology, education, communication, human ecology, and religious work.

Students minoring in family development must complete 16 semester hours, including ASI 448, SOC 331 and 12 semester hours from approved courses. The total semester hours for the minor must come from three different academic disciplines and may double count to majors and other minors.

Students desiring to minor in family development should notify their advisors, their deans, and the coordinator of family development.

**Family Development Coordinator**

Brenda Donnelly (Fitz Center for Leadership in Community)

## Minor in Family Development (FDV)

**Family Development**

ASI 448	Seminar in Family Development	1
SOC 331	Marriages & Families	3
Select four courses from three different disciplines:		12
ANT 320	Anthropology of Childhoods	



CMM 410	Family Communication	
CMM 499	Special Topics in Communication	
CMS 415	Women & Communication	
HST 351	American Gender & Women's History	
HST 352	History of the American Family	
HST 353	History of Women in European Societies	
HST 354	History of Women & Gender in the Middle East	
PHL 318	Family Ethics	
PSY 251	Human Growth & Development	
PSY 351	Child Psychology	
PSY 353	The Psychology of Adult Development & Aging	
PSY 355	Developmental Psychopathology	
PSY 443	Psychology of Women	
PSY 457	Television & Its Effects on Children	
PSY 462	Human Sexuality	
REL 344	Christian Marriage	
REL 362	Christian Family Values & Television	
SOC 322	Sex Roles & Society	
SOC 323	Juvenile Justice	
SOC 330	Perspectives on Aging	
SOC 333	Sociology of Sexualities	
SOC 355	Families & the Economy	
SWK 325	Child Abuse	
SWK 327	Parenting: Social Welfare Role	
SWK 330	Perspectives on Aging	
SWK 331	Death, Dying and Suicide	
Total Hours		16

## Film Studies

The interdisciplinary minor in film studies (FLM) provides students an opportunity to explore one of the most popular and influential media from the twentieth century to the present. Students study the history, theory, and aesthetics of film and consider film from literary, philosophic, religious, economic, and creative perspectives. The minor complements many of the existing majors in the arts and sciences and enhances the academic preparation of students who are considering graduate school and/or careers in film criticism, screenwriting, or film production.

Students minoring in film studies must complete 13 semester hours including four approved three-credit film courses in various disciplines and a one-credit required capstone course, ASI 350.

Students desiring to minor in film studies should notify their respective deans and the coordinator of film studies.

### Film Studies Committee

James Farrelly (English), Coordinator  
Fouke (Philosophy), Kimbrough (English), McCombe (English), Zukowski (Religious Studies)

## Minor in Film Studies (FLM)

### Film Studies

ASI 350	Interdisciplinary Film Study <sup>1</sup>	1
Select four courses from: <sup>2</sup>		12

CMM 345	Classic American Film
ENG 331	Studies in Film
ENG 332	Studies in Literature & Film
MUS 327	Music in Film
PHL 324	Philosophy & Film
REL 372	Religion & Film

Total Hours	13
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- 1 Capstone course taken after all elective courses have been completed.
- 2 Or other courses with permission of the committee.

## General Studies

- Bachelor of General Studies (p. 174)

The Bachelor of General Studies program is designed for those students who desire to pursue a non-traditional degree program at the University outside of any departmental major. This degree program permits great latitude in utilizing the academic resources of the University for planning and acquiring an education to meet individual needs. Students may plan their programs to the best advantage of their particular educational objectives. Students build their programs on the foundation of University's Common Academic Program requirements.

## Bachelor of General Studies (GEN) Minimum 120 Hours

Admission requirements for the Bachelor of General Studies are the same as those for any other degree offered in the College of Arts and Sciences.

Candidacy for the Bachelor of General Studies may be declared in the first year but not later than the commencement of a student's last 30 semester hours of study. An application for acceptance into the degree program must be completed and approved by an Assistant Dean in the College of Arts and Sciences. Any students in good academic standing may request transfer into this program.

The General Studies student is required to plan an academic program to satisfy the requirements for graduation in consultation with an Assistant Dean. The General Studies student must complete a minimum of the last 30 semester hours of study under the supervision of an Assistant Dean who will serve as the student's advisor. The usual policy of prerequisites remains in effect in this program.

1. College of Arts and Sciences' Competencies and the University's Common Academic Program requirements,
2. Three semester hours of mathematics selected from courses offered by the Mathematics department (excluding MTH 205),
3. Study of the natural sciences by completing seven semester hours in approved natural science courses (biology, chemistry, geology, physics), including one course with accompanying laboratory,
4. A minimum of 54 semester hours of courses at the 300-400 level with a grade point average of 2.0 or better,
5. Not more than 30 semester hours of work from any one academic discipline.
6. Credits earned in completion of the Bachelor of General Studies may not be applied at a later time to the credits for a second degree from the College of Arts and Sciences.

7. Successful completion of GNS 480, Senior Capstone course.

A Bachelor of General Studies requires at least 120 semester hours of credit.

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
HST 103 West and the World	
REL 103 Introduction to Religious and Theological Studies	
PHL 103 Intro To Philosophy	
ENG 100 Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>	0-3
ENG 200 Writing Seminar II	
Oral Communication	3
CMM 100 Principles of Oral Communication	
Mathematics	3
Social Science	3
Arts	3
Natural Sciences <sup>4</sup>	7
Crossing Boundaries	variable credit
Faith Traditions	
Practical Ethical Action	
Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

### Major Requirements

General Studies Area at the 300/400 level <sup>1, 2</sup>	54
GNS 480 Senior Capstone	0

### Breadth

ASI 150 Introduction to the University Experience	1
Total Hours to total at least	120

<sup>1</sup> Includes 300/400 CAP courses.

<sup>2</sup> May not include more than thirty semester hours from any one academic discipline.

### First Year

Fall	Hours Spring	Hours
ASI 150	1 ENG 100	3

CMM 100	3 HST 103, PHL 103, or REL 103 (CAP Humanities)	3
HST 103, PHL 103, or REL 103 (CAP Humanities)	3 CAP Mathematics	3
HST 103, PHL 103, or REL 103 (CAP Humanities)	3 CAP Natural Science	4
CAP Arts	3 General Elective	3
CAP Natural Science	3	
	<b>16</b>	<b>16</b>

### Second Year

Fall	Hours Spring	Hours
ENG 200	3 CAP Faith Traditions (GS Major)	3
SSC 200 (CAP Social Science)	3 General Studies Major	3
General Studies Major	3 General Studies Major	3
General Studies Major	3 General Elective	3
General Elective	3 General Elective	3
	<b>15</b>	<b>15</b>

### Third Year

Fall	Hours Spring	Hours
Advanced PHL/REL (GS Major)	3 Advanced HST (GS Major)	3
CAP Inquiry	3 Advanced PHL/REL (GS Major)	3
General Studies Major	3 CAP Practical Ethical Action (GS Major)	3
General Studies Major	3 General Studies Major	3
General Elective	3 General Elective	3
	<b>15</b>	<b>15</b>

### Fourth Year

Fall	Hours Spring	Hours
General Studies Major	3 GNS 480	0
General Studies Major	3 CAP Diversity and Social Justice	3
General Studies Major	3 General Studies Major	3
General Elective	3 General Studies Major	3
General Elective	2 General Studies Major	3
	General Elective	2
	<b>14</b>	<b>14</b>

Total credit hours: 120

## Geology

Majors:

- Bachelor of Science, Environmental Geology (p. 176)
- Bachelor of Science, Geology (p. 177)

Minor:

- Geology (p. 178)

Geology is the study of the Earth, both past and present. It incorporates many aspects of our complex planet including its composition, structure, environment, internal and surficial processes, and the development of life, continents and oceans through time. Geology plays a critical role in

interpreting the Earth's long history of physical and biological changes, finding and managing natural resources, and understanding natural hazards and future environmental change.

The geology department offers two programs leading to Bachelor of Science degrees in geology and environmental geology. The geology (GEO) major provides basic courses in the geological sciences as well as a range of advanced level classes that allow students to develop courses of study that complement particular interests within the field such as energy and mineral resources, plate tectonics, or paleontology.

The environmental geology (EVG) program is broad in scope, providing a broad foundation in the fundamentals of earth and environmental science as well as an interdisciplinary curriculum that includes geology, biology, chemistry, and other allied science courses. The EVG curriculum stresses the interdisciplinary nature of modern environmental issues such as climate change and the development of alternative energy resources.

The geology department also offers a Geographic Information Systems (GIS) Certificate Program. GIS is used in a wide range of disciplines, and the certificate program is a great option for professionals, graduate students, and undergraduate students who are interested in becoming proficient at managing, analyzing and displaying all forms of geographically referenced information.

The geology department aims to prepare students for both careers in the geological sciences, and for further academic studies. Hence, graduates of the department are also highly competitive for entry to graduate programs. Geology department majors pursue careers in a wide range of settings including:

- State and Federal Geological Agencies
- Geological Consulting Companies
- Natural Resource Exploration, Development and Management
- Museums
- Research Laboratories
- Education

Environmental geologists address critical needs of our society including global climate change, groundwater protection, energy resources, and the identification and assessment of natural hazards.

A minor in geology consists of 12 semester hours.

### Faculty

Daniel Goldman, Chairperson

Professor Emeritus: Ritter

Professors: Pair, Sandy

Associate Professors: Goldman, Koziol, A. McGrew, Wu

Assistant Professor: Haritashya

Lecturer: Bedaso

Lab Coordinator: Schoenenberger

## Bachelor of Science with a major in Environmental Geology (EVG) Minimum 120 Hours

The following program, leading to the Bachelor of Science with a major in environmental geology, is designed to present students with the basic courses in the geological sciences as well as provide specific environmental geology courses. The program also requires additional related science courses.

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
HST 103	West and the World
REL 103	Introduction to Religious and Theological Studies
PHL 103	Intro To Philosophy
ENG 100	Writing Seminar I <sup>2</sup>
Second-Year Writing Seminar <sup>3</sup>	0-3
ENG 200	Writing Seminar II
Oral Communication	3
CMM 100	Principles of Oral Communication
Mathematics	3
Social Science	3
Arts	3
Natural Sciences <sup>4</sup>	7
Crossing Boundaries	variable credit
Faith Traditions	
Practical Ethical Action	
Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

### Science Breadth Requirements

(Satisfies CAP Mathematics and CAP Natural Science)		
BIO 151	Concepts of Biology I: Cell & Molecular Biology	3
BIO 152	Concepts of Biology II: Evolution & Ecology	3
CHM 123 & 123L	General Chemistry and General Chemistry Laboratory	4
CHM 124 & 124L	General Chemistry and General Chemistry Laboratory	4
MTH 168	Analytic Geometry & Calculus I <sup>1</sup>	4
MTH 169	Analytic Geometry & Calculus II <sup>1</sup>	4
PHY 206	General Physics I - Mechanics <sup>2</sup>	3
PHY 207	General Physics II - Electricity & Magnetism <sup>2</sup>	3

### Major Requirements 61

Year 1		
GEO 115 & 115L	Physical Geology and Physical Geology Laboratory	4
GEO 116 & 116L	Geological History of the Earth and Geological History of the Earth Laboratory	4

Year 2		
GEO 201 & 201L	Mineralogy and Mineralogy Laboratory	4
GEO 208	Environmental Geology	3
Year 3		
GEO 301 & 301L	Structural Geology and Structural Geology Laboratory	4
GEO 307 & 307L	Geomorphology and Geomorphology Laboratory	4
GEO 310 & 310L	Stratigraphy and Stratigraphy Laboratory	4
Year 4		
GEO 308	Problems & Decisions in Environmental Geology	3
GEO 309 & 309L	Surface & Groundwater Hydrology and Surface and Groundwater Hydrology Laboratory	4
GEO 479L	Environmental Instrumentation Laboratory	2
Select one from: (Satisfies CAP Major Capstone)		4-6
GEO 480	Senior Capstone Project & Presentation	
GEO 477H & GEO 478H	Honors Thesis and Honors Thesis	
GEO 498	Geological Research & Thesis	
Select GEO electives from:		4
GEO 302 & 302L	Glacial Geology and Glacial Geology Laboratory	
GEO 303	Field Geology	
GEO 401 & 401L	Paleontology and Paleontology Laboratory	
GEO 403 & 403L	Sedimentology and Sedimentology Laboratory	
GEO 404	Problems in Geology	
GEO 411 & 411L	Petrology and Petrology Laboratory	
GEO 412 & 412L	Introductory Geochemistry and Introductory Geochemistry Laboratory	
GEO 450	Applied Geographic Information Systems	
Select six science electives from:		17
BIO 310 & 310L	Ecology and Ecology Laboratory	
BIO 350 & 350L	Applied Microbiology and Applied Microbiology Laboratory	
BIO 452 & 452L	Biology of Rivers & Lakes and Biology of Rivers & Lakes Laboratory	
BIO 459 & 459L	Environmental Ecology and Environmental Ecology Laboratory	
CEE 312 & 312L	Geotechnical Engineering and Geotechnical Engineering Laboratory	
CEE 390	Environmental Pollution Control	
CEE 434 & 434L	Water & Wastewater Engineering and Water & Wastewater Engineering Laboratory	
CHM 201 & 201L	Quantitative Analysis and Quantitative Analysis Laboratory	
CHM 302	Physical Chemistry	
CHM 313 & 313L	Organic Chemistry and Organic Chemistry Laboratory	

CHM 341 & 341L	Environmental Chemistry and Environmental Chemistry Laboratory
CPS 132	Computer Programming for Engineering & Science
CPS 144	Introduction to Computer Programming
MTH 218	Analytic Geometry & Calculus III
MTH 219	Applied Differential Equations
MTH 367	Statistical Methods I
MTH 368	Statistical Methods II

**Breadth**

ASI 150	Introduction to the University Experience	1
Social and Behavioral Sciences (Includes CAP Social Science)		6
Total Hours to total at least		120

<sup>1</sup> May substitute MTH 148-MTH 149 with permission of department chairperson.

<sup>2</sup> May substitute PHY 201-PHY 202 with permission of department chairperson.

## Bachelor of Science with a major in Geology (GEO) Minimum 120 HOURS

**Common Academic Program (CAP)**

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
HST 103	West and the World
REL 103	Introduction to Religious and Theological Studies
PHL 103	Intro To Philosophy
ENG 100	Writing Seminar I <sup>2</sup>
Second-Year Writing Seminar <sup>3</sup>	0-3
ENG 200	Writing Seminar II
Oral Communication	3
CMM 100	Principles of Oral Communication
Mathematics	3
Social Science	3
Arts	3
Natural Sciences <sup>4</sup>	7
Crossing Boundaries	variable credit
Faith Traditions	
Practical Ethical Action	
Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.



<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

### Science Breadth Requirements

(Satisfies CAP Mathematics and CAP Natural Sciences)		
CHM 123 & 123L	General Chemistry and General Chemistry Laboratory	4
CHM 124 & 124L	General Chemistry and General Chemistry Laboratory	4
MTH 168	Analytic Geometry & Calculus I <sup>1</sup>	4
MTH 169	Analytic Geometry & Calculus II <sup>1</sup>	4
PHY 206	General Physics I - Mechanics <sup>2</sup>	3
PHY 207	General Physics II - Electricity & Magnetism <sup>2</sup>	3

### Major Requirements 54

Year 1		
GEO 115 & 115L	Physical Geology and Physical Geology Laboratory	4
GEO 116 & 116L	Geological History of the Earth and Geological History of the Earth Laboratory	4
Year 2		
GEO 201 & 201L	Mineralogy and Mineralogy Laboratory	4
Year 3		
GEO 301 & 301L	Structural Geology and Structural Geology Laboratory	4
GEO 307 & 307L	Geomorphology and Geomorphology Laboratory	4
Year 4		
GEO 303	Field Geology	6
GEO 310 & 310L	Stratigraphy and Stratigraphy Laboratory	4
GEO 401 & 401L	Paleontology and Paleontology Laboratory	4
GEO 403 & 403L	Sedimentology and Sedimentology Laboratory	4
Select one from: (Satisfies CAP Major Capstone)		2-6
GEO 480	Senior Capstone Project & Presentation	
GEO 477H & GEO 478H	Honors Thesis and Honors Thesis	
GEO 498	Geological Research & Thesis	
Select GEO electives from:		4
GEO 302 & 302L	Glacial Geology and Glacial Geology Laboratory	
GEO 308 & 308L	Problems & Decisions in Environmental Geology and Problems & Decisions in Environmental Geology Laboratory	
GEO 309 & 309L	Surface & Groundwater Hydrology and Surface and Groundwater Hydrology Laboratory	
GEO 404	Problems in Geology	
GEO 411 & 411L	Petrology and Petrology Laboratory	

GEO 412 & 412L	Introductory Geochemistry and Introductory Geochemistry Laboratory
GEO 450	Applied Geographic Information Systems
GEO 477H	Honors Thesis

Science electives and laboratories where applicable from:	8
BIO, CHM, CPS, GEO, MTH, PHY, Engineering <sup>3</sup>	

### Breadth

ASI 150	Introduction to the University Experience	1
Social and Behavioral Sciences (Includes CAP Social Science)		6
Total Hours to total at least		124

<sup>1</sup> May substitute MTH 148-MTH 149 with permission of department chairperson.

<sup>2</sup> May substitute PHY 201-PHY 202 with permission of department chairperson.

<sup>3</sup> With permission of department chairperson.

## Minor in Geology (GEO)

### Geology

Select four GEO courses (300/400 level) <sup>1</sup>	12
Total Hours	12

<sup>1</sup> Appropriate prerequisites must be completed.

- Bachelor of Science, Environmental Geology (p. 178)
- Bachelor of Science, Geology (p. 177)

## Environmental Geology

### First Year

Fall	Hours Spring	Hours
ASI 150	1 GEO 116 & 116L	4
GEO 115 & 115L	4 MTH 169	4
MTH 168 (satisfies CAP Mathematics)	4 CHM 124 & 124L	4
CHM 123 & 123L (satisfies CAP Natural Science)	4 REL 103, PHL 103, or HST 103 (satisfies CAP Humanities)	3
ENG 100 (satisfies CAP Writing Seminar)	3 REL 103, PHL 103, or HST 103 (satisfies CAP Humanities)	3
	<b>16</b>	<b>18</b>

### Second Year

Fall	Hours Spring	Hours
GEO 201 & 201L	4 GEO 208	3
BIO 151	3 Geology elective w/lab	4
PHY 206	3 BIO 152	3
REL 103, PHL 103, or HST 103	3 PHY 207	3
ENG 200	3 CMM 100 (satisfies CAP Communication)	3
	<b>16</b>	<b>16</b>

**Third Year**

<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
GEO 301 & 301L	4 GEO 310 & 310L	4
GEO 307 & 307L	4 Science Elective	3
Science Elective	3 Arts	3
Social Science (CAP)	3 Adv HST	3
Adv PHL/REL (PEA/FT)	3 Adv PHL/REL (PEA/FT)	3
	<b>17</b>	<b>16</b>

**Fourth Year**

<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
GEO 477H, 480, or 498 (capstone)	3-4 GEO 479L	2
GEO 308	3 Science Elective	4
GEO 309 & 309L	4 Science Elective	3
Science elective w/lab	4 Inquiry	3
Integrative	3 Diversity and Social Justice	3
	Social Science	3
	<b>17-18</b>	<b>18</b>

Total credit hours: 134-135

**Geology****First Year**

<b>Fall</b>	<b>Hours Spring</b>	<b>Hours Summer</b>	<b>Hours</b>
ASI 150	1 GEO 116 & 116L	4 GEO 303	6
GEO 115 & 115L	4 Science Elective	4	
MTH 168 (CAP MTH)	4 MTH 169	4	
ENG 100 (satisfies CAP Writing Seminar)	3 REL 103, PHL 103, or HST 103 (satisfies CAP Humanities)	3	
REL 103, PHL 103, or HST 103 (satisfies CAP Humanities )	3		
	<b>15</b>	<b>15</b>	<b>6</b>

**Second Year**

<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
GEO 201 & 201L	4 CHM 124 & 124L	4
CHM 123 & 123L (satisfies CAP Natural Science)	4 PHY 207	3

PHY 206	3 GEO elective w/ lab	4
REL 103, PHL 103, or HST 103 (satisfies CAP Humanities)	3 CMM 100 (satisfies CAP Communication)	3
Social Science	3 ENG 200	3
	<b>17</b>	<b>17</b>

**Third Year**

<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
GEO 301 & 301L	4 GEO 307 & 307L	4
Science elective	4 Social Science (CAP)	3
Adv PHL/REL (PEA/FT)	3 Inquiry	3
Arts	3 Adv PHL/REL (PEA/FT)	3
General Elective	3 Adv HST	3
	<b>17</b>	<b>16</b>

**Fourth Year**

<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
GEO 477H, 480, or 498 (capstone)	3-4 GEO 310 & 310L	4
Integrative	3 GEO 401 & 401L	4
Diversity and Social Justice	3 GEO 403 & 403L	4
General elective (optional)	3 General Elective	3
	<b>12-13</b>	<b>15</b>

Total credit hours: 130-131

**Courses****GEO 103. Principles of Geography. 3 Hours**

The study of spatial processes that shape the Earth's physical and cultural environment through a survey of major branches of physical and human geographic inquiry.

**GEO 104. Biology-Geology Field Course. 3 Hours**

Fundamental earth science topics with emphasis on direct field experience. One week on campus, three weeks in the Rocky Mountains near Denver, Colorado, and one week of travel. For all non-geology and non-biology majors. Corequisite(s): BIO 104; (BIO 104L or GEO 104L).

**GEO 104L. Biology-Geology Field Laboratory. 1 Hour**

Course to accompany GEO 104.

**GEO 109. Earth, Environment, and Society. 3 Hours**

This course examines the complex relationship between natural geologic processes and their effects on human society. The course will examine fundamental geologic processes and associated hazards (such as earthquakes, tsunamis, volcanic eruptions, flooding) while also assessing human impacts such as pollution, energy industry and land-use planning. This course provides an opportunity to discuss, from a geologic perspective, the ramifications of and potential solutions to problems associated with utilization of Earth's resources. Laboratory optional but not required. No prerequisite.

**GEO 109L. General Geology to earth, Environment and Society. 1 Hour**

Course to accompany GEO 109. Two hours each week.

**GEO 115. Physical Geology. 3 Hours**

Introductory course in geologic principles and processes. Examines Earth's major systems including the solid Earth, atmosphere, hydrosphere, and cryosphere. Laboratory optional for non-majors.

**GEO 115L. Physical Geology Laboratory. 1 Hour**

Course to accompany GEO 115. Two hours each week. Prerequisite(s): (GEO 109 or GEO 115); permission of instructor.

**GEO 116. Geological History of the Earth. 3 Hours**

Comprehensive study of earth history from its origins to the present. Prerequisite(s): (GEO 109 or GEO 115); permission of instructor.

**GEO 116L. Geological History of the Earth Laboratory. 1 Hour**

Course to accompany GEO 116. Two hours each week.

**GEO 198. Geology, Landscape & Environment of the Miami Valley. 3 Hours**

Field-based course examining the geologic history of the Miami Valley and Dayton area; processes leading to the modern landscape; the impact of human activity will be assessed. Prerequisite(s): GEO 109 or GEO 115 or permission of instructor.

**GEO 201. Mineralogy. 3 Hours**

Introduction to crystallography, crystal chemistry and crystal structure. Study of the major groups of rock-forming minerals, their association and occurrence with emphasis on identification by physical properties and optical techniques. Prerequisite(s): (GEO 109 or GEO 115) or permission of instructor.

**GEO 201L. Mineralogy Laboratory. 1 Hour**

Course to accompany GEO 201. Three hours per week.

**GEO 204. Geology for Teachers. 4 Hours**

Introduction for preservice teachers to the Earth system and the processes that operate in the atmosphere, hydrosphere, biosphere, and solid Earth. Emphasis is on understanding how interactions among these fundamental Earth systems maintain our livable planet. Students will explore the Earth system through best practices in teaching and inquiry, and through field trips. For ECE, EMS, and EMM majors only. Students completing this course may not take SCI 210. Prerequisite(s): EDT 110; SCI 190.

**GEO 208. Environmental Geology. 3 Hours**

Study of the relationship of geologic factors to the problems of water supply, pollution, erosion, land use, and earth resources. Laboratory optional.

**GEO 208L. Environmental Geology Laboratory. 1 Hour**

Course to accompany GEO 208. Two hours each week.

**GEO 218. Geological Site Investigation for Engineers. 3 Hours**

Exploration of the principles of geological site investigation applied to land-use planning, geohazard risk analysis, and diverse engineering applications.

**GEO 234. Energy Resources. 3 Hours**

The chemical and geological aspects of formation, production, and benefits/costs (including environmental impacts) of energy derived from fossil fuels (coal and hydrocarbons), biofuels (e.g., ethanol production), radioactive materials (nuclear power), and renewable sources (e.g., geothermal, hydro, wind, and solar power).

**GEO 301. Structural Geology. 3 Hours**

The origin and development of structural features of the earth's crust; folding, faulting, volcanism, mountain building, and metamorphism. Prerequisite(s): GEO 115, GEO 116, GEO 201.

**GEO 301L. Structural Geology Laboratory. 1 Hour**

Course to accompany GEO 301. Two hours each week.

**GEO 302. Glacial Geology. 3 Hours**

The origin of mountain and continental glaciers; their depositional features and erosive activity; history of glaciation in geologic past with special emphasis on North American Quaternary ice advances. Prerequisite(s): GEO 115, GEO 116.

**GEO 302L. Glacial Geology Laboratory. 1 Hour**

Course to accompany GEO 302. Two hours each week.

**GEO 303. Field Geology. 6 Hours**

Study of field relationships in an area containing abundant igneous, metamorphic, and sedimentary rocks. Prerequisite(s): GEO 115, GEO 116.

**GEO 307. Geomorphology. 3 Hours**

Detailed study of landforms and the erosional processes that develop them. Prerequisite(s): GEO 115, GEO 116.

**GEO 307L. Geomorphology Laboratory. 1 Hour**

Course to accompany GEO 307. Two hours each week.

**GEO 308. Problems & Decisions in Environmental Geology. 3 Hours**

An in-depth examination of selected environmental problems and the way in which scientific information guides practice and policy. Topics will range from investigations of natural hazards to considerations of land use and water resources. Prerequisite(s): (GEO 109 or GEO 115) or permission of instructor.

**GEO 308L. Problems & Decisions in Environmental Geology Laboratory. 1 Hour**

Course to accompany GEO 308. Two hours each week and periodic field work.

**GEO 309. Surface & Groundwater Hydrology. 3 Hours**

This course is designed to provide a science or engineering student with the fundamental concepts and principles central to the study of water as a resource. This will include an examination of all components of the hydrologic cycle including surface-water hydrology and management, groundwater hydrogeology, and water resource management. Prerequisite(s): (GEO 109 or GEO 218) or permission of instructor.

**GEO 309L. Surface and Groundwater Hydrology Laboratory. 1 Hour**

Laboratory exercises to accompany GEO 309. Three hours per week.

**GEO 310. Stratigraphy. 3 Hours**

The interpretation of specific lithotypes and the synthesis of the stratigraphic record. Prerequisite(s): GEO 116.

**GEO 310L. Stratigraphy Laboratory. 1 Hour**

Course to accompany GEO 310. Two hours each week.

**GEO 401. Paleontology. 3 Hours**

The study of ancient life. The morphology, ecology, evolution, and stratigraphic distributions of selected invertebrates, vertebrates, and plants.

**GEO 401L. Paleontology Laboratory. 1 Hour**

Course to accompany GEO 401. Two hours each week.

**GEO 403. Sedimentology. 3 Hours**

Detailed study of sediments: their sources, environments of deposition, and methods of consolidation. Emphasis on the interpretation of ancient sediments. Prerequisite(s): GEO 201.

**GEO 403L. Sedimentology Laboratory. 1 Hour**

Course to accompany GEO 403. Two hours each week.

**GEO 404. Problems in Geology. 1-4 Hours**

Consideration of special problems involving advanced work in the laboratory and library; arranged to meet the needs of individual students.

**GEO 411. Petrology. 3 Hours**

Study of the formation of sedimentary, igneous, and metamorphic rocks. Prerequisite(s): GEO 201.

**GEO 411L. Petrology Laboratory. 1 Hour**

Course to accompany GEO 411. Two hours each week. Prerequisite(s): GEO 201.

**GEO 412. Introductory Geochemistry. 3 Hours**

Study of elementary thermodynamics, aqueous geochemistry, and principles governing the distribution of trace elements, radioisotopes and stable isotopes in igneous, metamorphic and sedimentary rocks. Emphasis on applications and solution of geological problems. Prerequisite(s): GEO 201 or permission of instructor.

**GEO 412L. Introductory Geochemistry Laboratory. 1 Hour**

Course to accompany GEO 412. Three hours each week.

**GEO 450. Applied Geographic Information Systems. 4 Hours**

Concepts and implementation of project design and analysis in geographic information systems (GIS). Students will learn the practice of GIS as a tool for spatial analysis, and as it applies in professional disciplines. The course will stress database design and present skills for data input, query analysis, and data output using GIS.

**GEO 455. Environmental Remote Sensing. 4 Hours**

Introduction to principles and concepts of remote sensing, a sophisticated technology of earth observation that provides fundamental data for global environmental investigation. Prerequisite(s): GEO 208 or permission of instructor.

**GEO 477H. Honors Thesis. 3 Hours**

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

**GEO 478H. Honors Thesis. 3 Hours**

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

**GEO 479L. Environmental Instrumentation Laboratory. 2 Hours**

The understanding and use of field and laboratory based equipment to study current environmental issues. Emphasis on team-centered approaches to investigating environmental problems. Prerequisite(s): (BIO 151, BIO 152) or (GEO 115, GEO 116) or permission of instructor.

**GEO 480. Senior Capstone Project & Presentation. 3 Hours**

Project and presentation in the scholarship, activity and/or practice related to the major. Students will present their work in a forum appropriate to the major.

**GEO 485. Geographic Information Systems Applications in Water Resources Planning & Management. 4 Hours**

An introduction to GIS applications in water resource management. Following an introduction to GIS basics, this course focuses on GIS techniques in surface water modeling and floodplain delineation and management.

**GEO 495. Geology Seminar. 1 Hour**

Introduction to professional practices in the geosciences. Students will attend seminar talks by guest speakers, research career options and graduate programs in the earth sciences, develop a professional resume, and participate in other profession-building activities. May be repeated. Prerequisite(s): Permission of instructor.

**GEO 498. Geological Research & Thesis. 4 Hours**

Research project within an area of the geological sciences, including, but not limited to, environmental geology, geochemistry, geomorphology, or paleontology. The results are to be presented in a written thesis. Prerequisite(s): Permission of instructor.

## Global Languages and Cultures

### Majors:

- Bachelor of Arts, French (p. 182)
- Bachelor of Arts, German (p. 182)
- Bachelor of Arts, Spanish (p. 183)

### Minors:

- French (p. 184)
- German (p. 184)
- Italian (p. 184)
- Spanish (p. 184)

The Department of Global Languages and Cultures offers instruction in Arabic, Chinese (Mandarin), French, German, Italian, Latin, Russian, and Spanish and thus brings a distinctively international perspective to the university community. The language programs focus on the development of proficiency in speaking, writing, reading, and listening, and integrate the study of literature, linguistics, business, and culture.

Each summer, faculty members in the Department of Global Languages and Cultures direct one-month language-immersion study programs in



China, France, Germany, Italy, and Latin America or Spain (alternate years) in conjunction with the Center for International Programs (CIP). Participants in these programs can earn up to seven semester hours of language credit.

Students in B.A. programs can acquire teacher licensure in French, German, or Spanish through the dual-degree B.A. and B.S.E. programs conducted in conjunction with the Department of Teacher Education in the School of Education and Health Sciences. For details consult the department chairperson.

All new students who have previously studied their language of choice continue their study in courses in which all enrolled students are at approximately the same level of proficiency. Students' proficiency levels for the first enrollment in a language class are determined by the results of the department's two-phase placement examination. Credit, but not placement, is awarded for scores of three or higher on the Advanced Placement language examinations.

A major in French, German or Spanish consists of 25 semester hours at the 300-level or higher. Many students combine a major in the department with a major in another discipline.

A minor in French, German, Italian, or Spanish consists of 12 semester hours at the 300-level or higher.

Courses beyond the 100-level in Latin and Russian are not offered on a regular basis. Please consult the department chairperson for details.

### Faculty

Francisco Peñas-Bermejo, Chairperson  
 Professors Emeriti: Chiodo, Conard, Mosher, O'Meara, Romaguera  
 Professors: Castro, Peñas-Bermejo  
 Associate Professors: Espinoza, Krugh  
 Assistant Professors: Costales, Ventura, Work, Yang  
 Lecturers: Castro Garcia, Figueroa, Schellhammer, Sharaf Eldin, Tanova, Tello-Sánchez

## Bachelor of Arts with a major in French (frn) Minimum 124 Hours

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
HST 103 West and the World	
REL 103 Introduction to Religious and Theological Studies	
PHL 103 Intro To Philosophy	
ENG 100 Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>	0-3
ENG 200 Writing Seminar II	
Oral Communication	3
CMM 100 Principles of Oral Communication	
Mathematics	3
Social Science	3
Arts	3
Natural Sciences <sup>4</sup>	7
Crossing Boundaries	variable credit
Faith Traditions	

Practical Ethical Action	
Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

- Completed with ASI 110 and ASI 120.
- Or ENG 100A and ENG 100B, or ENG 200H, by placement.
- Completed with ENG 200H or ASI 120.
- Must include two different disciplines and accompanying lab.

### Liberal Studies Curriculum

Creative and Performing Arts (May include CAP Arts)	3
Mathematics, excluding MTH 205 (Satisfies CAP Mathematics)	3
Natural Sciences (Satisfies CAP Natural Science)	11
Social Sciences (Includes CAP Social Science)	12

### Major Requirements

FRN 311 French Conversation I	3
or FRN 312 French Conversation II	
FRN 321 French Composition I	3
or FRN 322 French Composition II	
LNG 495 The Language Major in Professional Careers (Satisfies CAP Major Capstone)	1
Select two courses from: (at least one must be in literature)	6
FRN 341 French Culture & Civilization	
FRN 360 Explication De Textes	
FRN 361 Survey of French Literature I	
FRN 362 Survey of French Literature II	
FRN 381 History of French Cinema	
FRN 450 French Literature	
FRN 452 Old World Meets New (FRN)	
Select four FRN courses (300/400 level) <sup>1</sup>	12

### Breadth

ASI 150 Introduction to the University Experience	1
Total Hours to total at least	124

- Only one literature in translation course may count toward the major. Students in the E11A program should note that courses in translation do not count toward the forty-five semester hours of a foreign language required for teacher certification.

## Bachelor of Arts with a major in German (ger) Minimum 124 Hours

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
HST 103 West and the World	

REL 103	Introduction to Religious and Theological Studies	
PHL 103	Intro To Philosophy	
ENG 100	Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>		0-3
ENG 200	Writing Seminar II	
Oral Communication		3
CMM 100	Principles of Oral Communication	
Mathematics		3
Social Science		3
Arts		3
Natural Sciences <sup>4</sup>		7
Crossing Boundaries		variable credit
Faith Traditions		
Practical Ethical Action		
Inquiry		
Integrative		
Advanced Study		variable credit
Philosophy and/or Religious Studies		
Historical Studies		
Diversity and Social Justice		3
Major Capstone		0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

### Liberal Studies Curriculum

Creative and Performing Arts (May include CAP Arts)	3
Mathematics, excluding MTH 205 (Satisfies CAP Mathematics)	3
Natural Sciences (Satisfies CAP Natural Science)	11
Social Sciences (Includes CAP Social Science)	12

### Major Requirements

GER 311	German Conversation I	3
or GER 312	German Conversation II	
GER 321	German Composition I	3
or GER 322	German Composition II	
LNG 495	The Language Major in Professional Careers (Satisfies CAP Major Capstone)	1
Select two courses from: (at least one must be in literature)		6
GER 341	German Culture & Civilization	
GER 361	Survey of German Literature I	
GER 362	Survey of German Literature II	
GER 450	German Literature	
Select four GER courses (300/400 level) <sup>1</sup>		12

### Breadth

ASI 150	Introduction to the University Experience	1
Total Hours to total at least		124

<sup>1</sup> Only one literature in translation course may count toward the major. Students in the E11A program should note that courses in translation do not count toward the forty-five semester hours of a foreign language required for teacher certification.

## Bachelor of Arts with a major in Spanish (spn) Minimum 124 Hours

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>		12
HST 103	West and the World	
REL 103	Introduction to Religious and Theological Studies	
PHL 103	Intro To Philosophy	
ENG 100	Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>		0-3
ENG 200	Writing Seminar II	
Oral Communication		3
CMM 100	Principles of Oral Communication	
Mathematics		3
Social Science		3
Arts		3
Natural Sciences <sup>4</sup>		7
Crossing Boundaries		variable credit
Faith Traditions		
Practical Ethical Action		
Inquiry		
Integrative		
Advanced Study		variable credit
Philosophy and/or Religious Studies		
Historical Studies		
Diversity and Social Justice		3
Major Capstone		0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

### Liberal Studies Curriculum

Creative and Performing Arts (May include CAP Arts)	3
Mathematics, excluding MTH 205 (Satisfies CAP Mathematics)	3
Natural Sciences (Satisfies CAP Natural Science)	11
Social Sciences (Includes CAP Social Science)	12

### Major Requirements

LNG 495	The Language Major in Professional Careers (Satisfies CAP Major Capstone)	1
SPN 311	Spanish Conversation I	3
or SPN 312	Spanish Conversation II	
SPN 321	Spanish Composition I	3

or SPN 322	Spanish Composition II	
Select two courses from: (at least one must be in literature)		6
SPN 341	Spanish Culture & Civilization	
SPN 342	Ibero-American Culture & Civilization	
SPN 361	Survey of Spanish Literature I	
SPN 362	Survey of Spanish Literature II	
SPN 363	Survey of Spanish-American Literature I	
SPN 364	Survey of Spanish-American Literature II	
SPN 450	Topics in Spanish Literature	
SPN 451	Topics in Spanish-American Literature	
SPN 471	Topics in Spanish Literature of the Twentieth Century	
SPN 472	Topics in Spanish-American Literature of the Twentieth Century	
Select four SPN courses (300/400 level) <sup>1</sup>		12

**Breadth**

ASI 150	Introduction to the University Experience	1
Total Hours to total at least		124

<sup>1</sup> Only one literature in translation course may count toward the major. Students in the E11A program should note that courses in translation do not count toward the forty-five semester hours of a foreign language required for teacher certification.

**Minor in French (frn)****French**

Select four FRN courses (300/400 level)	12
Total Hours	12

**Minor in German (ger)****German**

Select four GER courses (300/400 level)	12
Total Hours	12

**Minor in Italian (ita)****Italian**

Select four ITA courses (300/400 level)	12
Total Hours	12

**Minor in Spanish (spn)****Spanish**

Select four SPN courses (300/400 level)	12
Total Hours	12

- Bachelor of Arts, French (p. 182)
- Bachelor of Arts, German (p. 182)
- Bachelor of Arts, Spanish (p. 183)

**French****First Year**

Fall	Hours Spring	Hours
ASI 150	1 ENG 100 (CAP Writing Seminar)	3
CMM 100 (CAP Communication)	3 FRN 141	4
FRN 101 (CAP Humanities)	4 HST 103, PHL 103, or REL 103 (CAP Humanities)	3
HST 103, PHL 103, or REL 103 (CAP Humanities)	3 INSS (CAP Natural Science)	4
HST 103, PHL 103, or REL 103 (CAP Humanities)	3 MTH (CAP Mathematics)	3
INSS (CAP Natural Science)	3	
	<b>17</b>	<b>17</b>

**Second Year**

Fall	Hours Spring	Hours
ENG 200	3 Social Science	3
FRN 201	3 CAP Arts	3
INSS (CAP Inquiry)	4 CAP Integrative	3
Social Science	3 FRN 202	3
General elective	3 SSC 200 (CAP Social Science)	3
	<b>16</b>	<b>15</b>

**Third Year**

Fall	Hours Spring	Hours
FRN 311 or 312	3 FRN 321 or 322	3
Creative & Performing Arts	3 Adv PHL (CAP Practical Ethical Action)	3
Social Science	3 Adv HST	3
General elective	3 FRN Major elective	3
General elective	3 General elective	3
	<b>15</b>	<b>15</b>

**Fourth Year**

Fall	Hours Spring	Hours
Adv REL (Faith Traditions)	3 LNG 495 (Capstone)	1
FRN Literature	3 FRN Major elective	3
FRN Major elective	3 FRN Major elective	3
FRN Major elective	3 Diversity and Social Justice	3
General elective	3 General elective	3
	General elective	1
	<b>15</b>	<b>14</b>

Total credit hours: 124

**GERman****First Year**

Fall	Hours Spring	Hours
ASI 150	1 ENG 100 (CAP Writing Seminar)	3
CMM 100 (CAP Communication)	3 GER 141	4
GER 101	4 HST 103, PHL 103, or REL 103 (CAP Humanities)	3

HST 103, PHL 103, or REL 103 (CAP Humanities)	3 INSS (CAP Natural Science)	4
HST 103, PHL 103, or REL 103 (CAP Humanities)	3 MTH (CAP Mathematics)	3
INSS (CAP Natural Science)	3	
	<b>17</b>	<b>17</b>

**Second Year**

Fall	Hours Spring	Hours
ENG 200	3 GER 202	3
GER 201	3 SSC 200 (CAP Social Science)	3
INSS (CAP Inquiry)	4 Social Science	3
Social Science	3 CAP Arts	3
General Elective	3 CAP Integrative	3
	<b>16</b>	<b>15</b>

**Third Year**

Fall	Hours Spring	Hours
GER 311 or 312	3 GER 321 or 322	3
Creative & Performing Arts	3 Adv PHL (CAP Practical Ethical Action)	3
Social Science	3 Adv HST	3
General elective	3 GER Major elective	3
General elective	3 General elective	3
	<b>15</b>	<b>15</b>

**Fourth Year**

Fall	Hours Spring	Hours
Adv REL (Faith Traditions)	3 LNG 495 (Capstone)	1
GER Literature	3 GER Major elective	3
GER Major elective	3 GER Major elective	3
GER Major elective	3 Diversity and Social Justice	3
General elective	3 General elective	3
	General elective	1
	<b>15</b>	<b>14</b>

Total credit hours: 124

**Spanish****First Year**

Fall	Hours Spring	Hours
ASI 150	1 ENG 100	3
CMM 100	3 SPN 141	4
SPN 101	4 HST 103, PHL 103, or REL 103 (CAP Humanities)	3
HST 103, PHL 103, or REL 103 (CAP Humanities))	3 INSS (CAP Natural Science)	4
HST 103, PHL 103, or REL 103 (CAP Humanities)	3 MTH (CAP Mathematics)	3
INSS (CAP Natural Science)	3	
	<b>17</b>	<b>17</b>

**Second Year**

Fall	Hours Spring	Hours
ENG 200	3 SPN 202 (satisfies CAP social science)	3
SPN 201	3 Social Science	3

INSS (CAP Inquiry)	4 CAP Arts	3
Social Science	3 CAP Integrative	3
General elective	3 SSC 200 (CAP social science)	3
	<b>16</b>	<b>15</b>

**Third Year**

Fall	Hours Spring	Hours
SPN 311 or 312	3 SPN 321 or 322	3
Creative & Performing Arts	3 Adv PHL (CAP Practical Ethical Action)	3
Social Science	3 Adv HST	3
General elective	3 SPN Major elective	3
General elective	3 General elective	3
	<b>15</b>	<b>15</b>

**Fourth Year**

Fall	Hours Spring	Hours
Adv REL (Faith Traditions)	3 LNG 495 (Capstone)	1
SPN Literature	3 SPN Major elective	3
SPN Major elective	3 SPN Major elective	3
SPN Major elective	3 Diversity and Social Justice	3
General elective	3 General elective	3
	General elective	1
	<b>15</b>	<b>14</b>

Total credit hours: 124

**Arabic Courses****ARA 101. Basic Proficiency in Arabic I. 4 Hours**

Development of basic communication and intercultural skills in reading, listening, writing, and speaking through extensive practice in language use. Admission is restricted to those who have not studied Arabic or have placed in this course by examination.

**ARA 141. Basic Proficiency in Arabic II. 4 Hours**

Further development of fundamental communication and intercultural skills in reading, listening, writing, and speaking through extensive practice in language use. Prerequisite(s): ARA 101 or placement by examination.

**ARA 201. Intermediate Arabic I. 4 Hours**

Expansion and extension of proficiency and intercultural skills in reading, listening, writing, and speaking through conversation practice, reading assignments, composition assignments, and grammar exercises. Successful completion of this course includes the demonstration of the proficiency level required by the College of Arts and Sciences' Liberal Studies Curriculum. Prerequisite(s): ARA 141 or placement by examination.

**ARA 202. Intermediate Arabic II. 4 Hours**

Continued development of proficiency and intercultural skills in reading, listening, writing, and speaking through conversation practice, reading assignments, composition assignments, and grammar exercises. Prerequisite(s): ARA 201 or placement by examination.



## Chinese Courses

### **CHI 101. Basic Proficiency in Mandarin Chinese I. 4 Hours**

Development of basic communication and intercultural skills in reading, listening, writing, and speaking through extensive practice in language use. Admission is restricted to those who have not studied Mandarin Chinese or have placed into this course by examination.

### **CHI 141. Basic Proficiency in Mandarin Chinese II. 4 Hours**

Further development of fundamental communication and intercultural skills in reading, listening, writing, and speaking through extensive practice in language use. Prerequisite(s): CHI 101 or placement by examination.

### **CHI 170. Study Abroad. 3 Hours**

Study in a foreign country/region whose everyday language is Chinese, focusing on the culture and civilization of the country. Conducted in English. Available only during the summer session. Repeatable when topic and content change. Prerequisite(s): CHI 101 (may be taken as a corequisite).

### **CHI 201. Intermediate Mandarin Chinese I. 4 Hours**

Expansion and extension of proficiency and intercultural skills in reading, listening, writing, and speaking through conversation practice, reading assignments, composition assignments, and grammar exercises. Successful completion of this course includes the demonstration of the proficiency level required by the College of Arts and Sciences' Liberal Studies Curriculum. Prerequisite(s): CHI 141 or placement by examination.

### **CHI 202. Intermediate Mandarin Chinese II. 4 Hours**

Continued development of proficiency and intercultural skills in reading, listening, writing, and speaking through conversation practice, reading assignments, composition assignments, and grammar exercises. Prerequisite(s): CHI 201 or placement by examination.

### **CHI 391. Directed Study. 1-3 Hours**

Guided study on selected topics and/or issues involving language proficiency, literature, linguistics or culture under the supervision of an instructor. Admission to this course and number of semester hours require approval of the chairperson. May be repeated when topic changes. Prerequisite(s): CHI 202; permission of department chairperson.

## French Courses

### **FRN 101. Basic Proficiency in French I. 4 Hours**

Development of basic communication and intercultural skills in reading, listening, writing, and speaking through extensive practice in language use. Admission is restricted to those who have not studied French or have placed into this course by examination.

### **FRN 131. Intensive Fundamental French. 2 Hours**

Intensive development of fundamental communication and intercultural skills in reading, listening, writing, and speaking through extensive practice in language use. Admission restricted to those who have previous experience with the language and place into this course by examination. Credit granted for only ONE of the following: FRN 101 or FRN 131.

### **FRN 141. Basic Proficiency in French II. 4 Hours**

Further development of fundamental communication and intercultural skills in reading, listening, writing, and speaking through extensive practice in language use. Prerequisite(s): (FRN 101 or FRN 131) or placement by examination.

### **FRN 201. Intermediate French I. 3 Hours**

Development of reading, listening, writing, and speaking skills. Language laboratory required. Successful completion of this course includes the demonstration of the proficiency level required by the College of Arts and Sciences' Liberal Studies Curriculum. Prerequisite(s): FRN 141.

### **FRN 202. Intermediate French II. 3 Hours**

Development of reading, listening, writing, and speaking skills. Language laboratory required. Prerequisite(s): FRN 201.

### **FRN 270. Intermediate Study Abroad. 1-7 Hours**

Intermediate intensive study in a foreign country/region whose everyday language is French. Instruction in language, culture and civilization. Conducted in French. Available only during the summer session. Repeatable when subtitle and content change. Prerequisite(s): FRN 141 or equivalent.

### **FRN 311. French Conversation I. 3 Hours**

Intensive practice in speaking French to develop oral communication skills. Emphasis on vocabulary development, listening comprehension, simulation of life-like situations, and discussions on French life and culture. Prerequisite(s): FRN 202.

### **FRN 312. French Conversation II. 3 Hours**

Intensive practice in speaking French to develop oral communication skills. Emphasis on vocabulary development, listening comprehension, simulation of life-like situations, and discussions on French life and culture. Prerequisite(s): FRN 202.

### **FRN 321. French Composition I. 3 Hours**

Practice in composition on topics dealing with French life and culture. Systematic vocabulary enrichment, refinement of grammar, and assimilation of stylistic patterns. Emphasis on correct writing and creativity. Initiation into the concept of style in French prose. Prerequisite(s): FRN 311 or FRN 312.

### **FRN 322. French Composition II. 3 Hours**

Practice in composition on topics dealing with French life and culture. Systematic vocabulary enrichment, refinement of grammar, and assimilation of stylistic patterns. Emphasis on correct writing and creativity. Initiation into the concept of style in French prose. Prerequisite(s): FRN 311 or FRN 312.

### **FRN 325. Introduction to Commercial French. 3 Hours**

Introduction to French business and the French position in international trade. Basic vocabulary of the office and the world of trade, introduction to formal correspondence and transactions. Prerequisite(s): FRN 311 or FRN 312.

### **FRN 341. French Culture & Civilization. 3 Hours**

Introduction to the history of French civilization with emphasis on the arts and life in each major cultural period. Recommended for all French majors and minors. Prerequisite(s): FRN 311 or FRN 312.

### **FRN 350. French Literature in Translation. 3 Hours**

Course to acquaint students with major topics in French and Francophone literature. Conducted in English. Repeatable when subtitle and content change.

### **FRN 352. Old World Meets New (ENG). 3 Hours**

Readings of (1) non-fictional narratives regarding French encounters with American Indians in the sixteenth and seventeenth centuries and (2) literary and philosophical works on this topic. Conducted in English. Students receive credit for either FRN 352 or FRN 452, not both.

**FRN 360. Explication De Textes. 3 Hours**

Introduction to method of analyzing literary texts, both prose and poetry. Elements of French versification. Recommended for all French majors and prospective teachers. Prerequisite(s): FRN 311 or FRN 312.

**FRN 361. Survey of French Literature I. 3 Hours**

Major texts, trends, authors from the Middle Ages to the present, showing influences and continuity. Lectures, discussions, oral and written reports. Recommended for all French majors and prospective teachers. Prerequisite(s): FRN 311 or FRN 312.

**FRN 362. Survey of French Literature II. 3 Hours**

Major texts, trends, authors from the Middle Ages to the present, showing influences and continuity. Lectures, discussions, oral and written reports. Recommended for all French majors and prospective teachers. Prerequisite(s): FRN 311 or FRN 312.

**FRN 370. Advanced Study Abroad. 1-7 Hours**

Advanced intensive study in a foreign country/region whose everyday language is French, treating its language, culture, and civilization. Conducted in French. Available only during the summer session. Repeatable when subtitle and content change. Prerequisite(s): FRN 202 or equivalent.

**FRN 381. History of French Cinema. 3 Hours**

Survey of the trends, styles, and principal directors in the history of French cinema. Discussion of personal, social, and cultural values portrayed in films. Prerequisite(s): FRN 311 or FRN 312.

**FRN 450. French Literature. 3 Hours**

Lectures and discussion concentrating on specialized genres, periods, or authors. Repeatable when subtitle and content change. Prerequisite(s): FRN 311 or FRN 312.

**FRN 452. Old World Meets New (FRN). 3 Hours**

Readings of (1) non-fictional narratives regarding French encounters with American Indians in the sixteenth and seventeenth centuries and (2) literary and philosophical works on this topic. Conducted in French. Students receive credit for either FRN 352 or FRN 452, not both. Prerequisite(s): FRN 311 or FRN 312.

**FRN 469. French Linguistics. 3 Hours**

Synchronic analysis of modern French language, including a contrast of the French sound system, morphology, and syntax with English structures; the historical derivation of French, creolization, and approaches to teaching French to English-speaking persons. Conducted in French. Prerequisite(s): (FRN 311 or FRN 312); LNG 468.

**FRN 469H. French Linguistics. 3 Hours**

Synchronic analysis of modern French language, including a contrast of the French sound system, morphology, and syntax with English structures; the historical derivation of French, creolization, and approaches to teaching French to English-speaking persons. Conducted in French. Prerequisite(s): (FRN 311 or FRN 312); LNG 468.

**FRN 477H. Honors Thesis. 3 Hours**

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

**FRN 478H. Honors Thesis. 3 Hours**

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

**FRN 491. Independent Study. 1-3 Hours**

Independent research project under the guidance of an instructor. Admission to project and number of semester hours require approval of the chairperson. Prerequisite(s): FRN 202; permission of department chairperson.

## German Courses

**GER 101. Basic Proficiency in German I. 4 Hours**

Development of basic communication and intercultural skills in reading, listening, writing, and speaking through extensive practice in language use. Admission is restricted to those who have not studied German or have placed into this course by examination.

**GER 131. Intensive Fundamental German. 2 Hours**

Field-based course examining the geologic history of the Miami Valley and Dayton area; processes leading to the modern landscape; the impact of human activity will be assessed. Prerequisite(s): GEO 109 or GER 115 or permission of instructor.

**GER 141. Basic Proficiency in German II. 4 Hours**

Further development of fundamental communication and intercultural skills in reading, listening, writing, and speaking through extensive practice in language use. Prerequisite(s): (GER 101 or GER 131) or placement by examination.

**GER 201. Intermediate German I. 3 Hours**

Systematic grammar review. Increased use of the language in written exercises and classroom discussions based on readings. Exposure to the development of German civilization and culture. Successful completion of this course includes the demonstration of the proficiency level required by the College of Arts and Sciences' Liberal Studies Curriculum. Prerequisite(s): GER 141.

**GER 202. Intermediate German II. 3 Hours**

Systematic grammar review. Increased use of the language in written exercises and classroom discussions based on readings. Exposure to the development of German civilization and culture. Prerequisite(s): GER 201.

**GER 311. German Conversation I. 3 Hours**

Practice to increase listening comprehension and fluency in speaking about topics from the personal and everyday to issues of current interest with focus on describing and narrating in paragraph-length structures. In-depth exploration of cultural commonalities and differences between the German-speaking countries and the United States. Focus on development of vocabulary and practice of expressions essential for oral communication. May be taken in either sequence. Prerequisite(s): GER 202.

**GER 312. German Conversation II. 3 Hours**

Practice to increase listening comprehension and fluency in speaking about topics from the personal and everyday to issues of current interest with focus on describing and narrating in paragraph-length structures. In-depth exploration of cultural commonalities and differences between the German-speaking countries and the United States. Focus on development of vocabulary and practice of expressions essential for oral communication. May be taken in either sequence. Prerequisite(s): GER 202.

**GER 321. German Composition I. 3 Hours**

Practice in personal and topical writing in German that seeks to develop the ability to write well-structured paragraphs. Systematic vocabulary building and grammatical refinement and review. Readings on key issues of the day and/or topics providing crucial insight into German and European thinking and concerns. May be taken in either sequence. Prerequisite(s): GER 311 or GER 312.

**GER 322. German Composition II. 3 Hours**

Practice in personal and topical writing in German that seeks to develop the ability to write well-structured paragraphs. Systematic vocabulary building and grammatical refinement and review. Readings on key issues of the day and/or topics providing crucial insight into German and European thinking and concerns. May be taken in either sequence. Prerequisite(s): GER 311 or GER 312.

**GER 325. Commercial German. 3 Hours**

Introduction to the business language, customs, and economic profile of the German-speaking countries. Vocabulary of the office and world of trade. Business correspondence. Germany's economic and cultural position and goals within the context of the European Union and the world. Course provides an introduction to working in an international business setting. Prerequisite(s): GER 311 or GER 312 or equivalent.

**GER 341. German Culture & Civilization. 3 Hours**

Introduction to German culture and civilization with emphasis on the arts, intellectual developments, and life in various periods of German history. Conducted in German. Prerequisite(s): GER 311 or GER 312.

**GER 342. Germany and the New Europe. 3 Hours**

Examination of developments in the life and culture, and the political, economic, and social realities in Germany from the end of WWI to the reunited country of today which is the largest member of EU. Course also explores the ideas and ideals on which the EU is founded, its present influence in the world, and how this new Europe differs from the United States of America. Conducted in German. Prerequisite(s): (GER 311 or 312) or equivalent.

**GER 350. German Literature & Civilization. 3 Hours**

Course to acquaint students with major German writers and literary movements. Conducted in English. Repeatable when subtitle and content change.

**GER 351. German Film. 3 Hours**

Introduction to the aesthetic and thematic richness of German film. Students will study the cinema of the Weimar Republic within its historical context and its appropriation by Hollywood. This course will also introduce cross-cultural films having to do with identity, women, immigrant workers, asylum seekers, postcolonialization, nationalism, social theory, ideology, and political activism. Prerequisite(s): GER 311 or GER 312.

**GER 361. Survey of German Literature I. 3 Hours**

German literary works from 1750 to the present reflecting the philosophy, aesthetics, and concerns of the time. Skills development for reading literary and cultural texts and writing on analytic and interpretative topics. May be taken in either sequence. Prerequisite(s): ((GER 311 or GER 312); (GER 321 or GER 322)) or equivalent.

**GER 362. Survey of German Literature II. 3 Hours**

German literary works from 1750 to the present reflecting the philosophy, aesthetics, and concerns of the time. Skills development for reading literary and cultural texts and writing on analytic and interpretative topics. May be taken in either sequence. Prerequisite(s): ((GER 311 or GER 312); (GER 321 or GER 322)) or equivalent.

**GER 370. Study Abroad. 1-6 Hours**

Intensive study in a foreign country whose everyday language is German, treating the culture and civilization of the country. Conducted in German. Available only during the summer session. Repeatable when subtitle and content change. Prerequisite(s): GER 202.

**GER 450. German Literature. 3 Hours**

Lectures and discussions in German in such specialized areas as Medieval lyric, Romanticism, twentieth-century novel, modern drama, and individual authors. Repeatable when subtitle and content change. Prerequisite(s): GER 311 or GER 312.

**GER 469. German Linguistics. 3 Hours**

Synchronic analysis of modern German language, including a contrast of the German sound system, morphology, and syntax with English structures; the historical derivation of German, the modern German dialects, and approaches to teaching German to English-speakers. Conducted in German. Prerequisite(s): (GER 311 or 312); LNG 468.

**GER 477H. Honors Thesis. 3 Hours**

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

**GER 478H. Honors Thesis. 3 Hours**

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

**GER 491. Independent Study. 1-3 Hours**

Independent research project under the guidance of an instructor. Admission to project and number of semester hours require approval of chairperson. Prerequisite(s): GER 202; permission of instructor.

## Hindi Courses

### HND 101. Beginning Hindi I. 3 Hours

Development of fundamental communication skills in reading, listening, writing, and speaking through extensive practice in language use. Admission to HND 101 restricted to those who have not studied Hindi or have placed into that course by examination. Offered only in India in connection with the B.A. Program in Philosophy. Credit is granted for only one of the following: HND 101, HND 102 or HND 121.

### HND 102. Beginning Hindi II. 3 Hours

Development of fundamental communication skills in reading, listening, writing, and speaking through extensive practice in language use. Admission to HND 102 is open only to those who have successfully completed 101. Offered only in India in connection with the B.A. Program in Philosophy. Credit is granted for only one of the following: HND 101, HND 102 or HND 121.

### HND 121. Elementary Hindi. 4 Hours

Review and further development of fundamental communication skills in reading, listening, writing, and speaking. Admission restricted to those who have studied the language for at least two years and place into the course by examination. Offered only in India in connection with the B.A. Program in Philosophy. Credit granted for only one of the following: HND 101 and HND 102 or HND 121.

### HND 141. Basic Proficiency in Hindi. 3 Hours

Further development of communication skills in reading, listening, writing, and speaking. Admission by examination or successful completion of HND 102 or HND 121. Successful completion of this course includes the demonstration of the minimal level of proficiency required for the College of Arts and Sciences' Liberal Studies Curriculum. Offered only in India in connection with the B.A. Program in Philosophy.

### HND 201. Intermediate Hindi I. 3 Hours

Review of the essentials of grammar, intensive conversation and comprehension exercises, reading of graded modern prose and poetry; brief essays in Hindi. Offered only in India in connection with the B.A.. Program in Philosophy. Prerequisite(s): HND 141; previous study of elementary Hindi in school or elsewhere; ability to speak, read, understand, and write simple Hindi.

### HND 202. Intermediate Hindi II. 3 Hours

Review of the essentials of grammar, intensive conversation and comprehension exercises, reading of graded modern prose and poetry; brief essays in Hindi. Offered only in India in connection with the B.A.. Program in Philosophy. Prerequisite(s): HND 201.

## Italian Courses

### ITA 101. Beginning Italian I. 4 Hours

Development of basic communication and intercultural skills in reading, listening, writing, and speaking through extensive practice in language use. Admission is restricted to those who have not studied Italian or have placed into this course by examination.

### ITA 141. Basic Proficiency in Italian. 4 Hours

Further development of fundamental communication and intercultural skills in reading, listening, writing, and speaking through extensive practice in language use. Prerequisite(s): ITA 101 or placement by examination.

### ITA 170. Study Abroad. 3 Hours

Study in a foreign country/region whose everyday language is Italian, focusing on the culture and civilization of the country. Conducted in English. Available only during the summer session. Repeatable when topic and content change. Prerequisite(s): ITA 101 (may be taken as a corequisite).

### ITA 201. Intermediate Italian I. 3 Hours

Development of reading, listening, writing, and speaking skills. Conversation practice, oral reports, reading assignments, composition assignments, and grammar exercises. The course is conducted in Italian. Successful completion of this course includes the demonstration of the proficiency level required by the College of Arts and Sciences' Liberal Studies Curriculum. Prerequisite(s): ITA 141.

### ITA 202. Intermediate Italian II. 3 Hours

Development of reading, listening, writing, and speaking skills. Conversation practice, oral reports, reading assignments, composition assignments, and grammar exercises. The course is conducted in Italian. Prerequisite(s): ITA 201.

### ITA 313. Communicating in Italian I. 3 Hours

Intensive practice in speaking and writing Italian at an advanced level. Emphasis on building vocabulary, learning correct idiomatic usage, increasing fluency, and improving syntax and style. The course is conducted in Italian. ITA 313 and 314 may be taken in either sequence. Prerequisite(s): ITA 202.

### ITA 314. Communicating in Italian II. 3 Hours

Intensive practice in speaking and writing Italian at an advanced level. Emphasis on building vocabulary, learning correct idiomatic usage, increasing fluency, and improving syntax and style. The course is conducted in Italian. ITA 313 and 314 may be taken in either sequence. Prerequisite(s): ITA 202.

### ITA 341. Italian Culture & Civilization I. 3 Hours

Survey of the major historical and cultural events in Italy from the Middle Ages to the present. All readings, lectures, discussions, reports, and tests are in Italian. ITA 341 and 342 may be taken in either sequence. Prerequisite(s): ITA 202.

### ITA 361. Survey of Italian Literature I. 3 Hours

Italian literature from its beginnings in the thirteenth century to the present. Principal writers and literary trends; the techniques of literary analysis. Lectures, discussions, readings, and papers are in Italian. ITA 361 and ITA 362 may be taken in either sequence. Prerequisite(s): ITA 202.

### ITA 362. Survey of Italian Literature II. 3 Hours

Italian literature from its beginnings in the thirteenth century to the present. Principal writers and literary trends; the techniques of literary analysis. Lectures, discussions, readings, and papers are in Italian. ITA 361 and ITA 362 may be taken in either sequence. Prerequisite(s): ITA 202.

### ITA 491. Study Abroad. 1-3 Hours

Independent research project under the guidance of an instructor. Admission to project and number of semester hours require approval of chairperson. Prerequisite(s): ITA 202 or permission of instructor.



## Languages Courses

### **LNG 101. Beginning Language Study. 4 Hours**

Development of fundamental communication skills in reading, listening, writing, and speaking with a focus on basic proficiency in survival communication, and familiarization with culture in languages other than those regularly taught in the Department of Languages. May be offered through distance learning or study abroad with the support of the Department of Languages. No previous study of the language is presupposed (for LNG 101 only). Offered with different suffixes according to the language studied.

### **LNG 141. Basic Proficiency in Language. 4 Hours**

Further development of communication skills in reading, listening, writing, and speaking with a focus on basic proficiency in survival communication, and familiarization with culture in languages other than those regularly taught in the Department of Languages. Offered with different suffixes according to the language studied. Prerequisite(s): LNG 101 in the same language or equivalent.

### **LNG 201. Intermediate Language I. 4 Hours**

Expansion and extension of listening, speaking, reading, and writing skills through conversation practice, reading assignments, composition assignments, and grammar exercises. Offered with different suffixes according to the language studied. Prerequisite(s): LNG 141 in the same language or equivalent.

### **LNG 202. Intermediate Language II. 4 Hours**

Continued development of proficiency in listening, speaking, reading and writing through conversation practice, reading assignments, composition assignments, and grammar exercises. Offered with different suffixes according to the language studied. Prerequisite(s): LNG 201 in the same language or equivalent.

### **LNG 320. Instructed Second Language Acquisition. 2 Hours**

Study of cognitive, linguistic, sociolinguistic, and constructivist approaches to instructed second language acquisition, including the relationship between classroom interaction and language acquisition.

### **LNG 330. Teaching World Languages in the Elementary School (PK-6). 4 Hours**

An introduction to the pedagogical, philosophical, and psychological aspects of teaching foreign languages in elementary school. Topics: national and state standards, learners with special needs, reading in the foreign language, and professional associations. Prerequisite(s): EDT 110; at least two 300-level courses in the language to be taught.

### **LNG 468. Introduction to Linguistics. 3 Hours**

Survey of the various aspects of a scientific description of human language: phonetics, phonology, morphology, syntax, semantics, and pragmatics. Interdisciplinary exploration of the reciprocal impact of linguistics on psychology, sociology, and language acquisition theory. Prerequisite(s): ((ENG 102 or ENG 200 or ENG 200H) or ASI 120) or equivalent; junior or senior standing or permission of department chairperson.

### **LNG 477H. Honors Thesis. 3 Hours**

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

### **LNG 478H. Honors Thesis. 3 Hours**

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

### **LNG 495. The Language Major in Professional Careers. 1 Hour**

Exploration of life-long learning opportunities to maintain and increase functional proficiency in the language studied; the relationship between language proficiency and cross-cultural studies and the application of language proficiency in the work place; determination of the student's proficiency-level at the conclusion of the undergraduate experience. Required of declared majors in languages (FRN, GER, LNG, and SPN). Taught in English. Prerequisite(s): Completion of 18 credit hours of upper-division courses in language major.

## Latin Courses

### **LAT 101. Basic Proficiency in Latin I. 4 Hours**

Development of basic skills in reading, listening, and writing through extensive practice in language use. Admission is restricted to those who have not studied Latin or have placed into this course by examination.

### **LAT 131. Intensive Fundamental Latin. 2 Hours**

Intensive development of fundamental skills in reading, listening, and writing through extensive practice in language use. Admission restricted to those who have previous experience with the language and place into this course by examination. Credit granted for only ONE of the following: LAT 101 or LAT 131.

### **LAT 141. Basic Proficiency in Latin II. 4 Hours**

Further development of fundamental skills in reading, listening, and writing through extensive practice in language use. Prerequisite(s): (LAT 101 or LAT 131) or placement by examination.

### **LAT 201. Intermediate Latin I. 3 Hours**

Systematic review of grammar, exercises in vocabulary development, readings from Caesar, Cicero, Virgil, or Ovid. Successful completion of this course includes the demonstration of the proficiency level required by the College of Arts and Sciences' Liberal Studies Curriculum. Prerequisite(s): LAT 141.

### **LAT 202. Intermediate Latin II. 3 Hours**

Systematic review of grammar, exercises in vocabulary development, readings from Caesar, Cicero, Virgil, or Ovid. Prerequisite(s): LAT 201.

### **LAT 321. Latin Composition & Syntax. 3 Hours**

Practice in writing Latin, for enrichment of vocabulary, refinement of grammar, and control of major Latin prose styles. Prerequisite(s): LAT 202.

### **LAT 350. Latin Literature. 3 Hours**

Advanced readings in a particular author or genre (epic, drama, history, philosophy). Repeatable when subtitle and content change. Prerequisite(s): LAT 202.

### **LAT 491. Independent Study. 1-3 Hours**

Independent research project under the guidance of an instructor. Admission to project and number of semester hours require approval of chairperson. Prerequisite(s): LAT 202 or permission of department chairperson.

## Russian Courses

### **RUS 101. Basic Proficiency in Russian I. 4 Hours**

Development of basic communication and intercultural skills in reading, listening, writing, and speaking through extensive practice in language use. Admission is restricted to those who have not studied Russian or have placed into this course by examination.

### **RUS 141. Basic Proficiency in Russian II. 4 Hours**

Further development of fundamental communication and intercultural skills in reading, listening, writing, and speaking through extensive practice in language use. Prerequisite(s): RUS 101 or placement by examination.

### **RUS 201. Intermediate Russian I. 3 Hours**

Review of the essentials of grammar, intensive conversation and comprehension exercises, reading of graded modern and contemporary prose and poetry. Successful completion of this course includes the demonstration of the proficiency level required by the College of Arts and Sciences' Liberal Studies Curriculum. Prerequisite(s): RUS 141.

### **RUS 202. Intermediate Russian II. 3 Hours**

Review of the essentials of grammar, intensive conversation and comprehension exercises, reading of graded modern and contemporary prose and poetry. Prerequisite(s): RUS 201.

### **RUS 311. Russian Conversation I. 3 Hours**

Vocabulary development, pattern drills, and the use of idioms in discussion and oral reports centered on Russian life and culture. RUS 311 and 312 may be taken in either sequence. Prerequisite(s): RUS 202.

### **RUS 312. Russian Conversation II. 3 Hours**

Vocabulary development, pattern drills, and the use of idioms in discussion and oral reports centered on Russian life and culture. RUS 311 and RUS 312 may be taken in either sequence. Prerequisite(s): RUS 202.

### **RUS 321. Russian Composition. 3 Hours**

Practice in composition on topics dealing with Russian life and culture; personal and business letters. Short weekly assignments to build vocabulary and control of idioms. Prerequisite(s): RUS 202.

### **RUS 361. Survey of Russian Literature. 3 Hours**

Russian literature and its development during the nineteenth and twentieth centuries. Study of exemplary works and literary movements. Prerequisite(s): RUS 202.

### **RUS 491. Independent Study. 1-6 Hours**

Independent study under the guidance of an instructor. Admission to course and number of semester hours require approval of chairperson. Repeatable when content changes.

## Spanish Courses

### **SPN 101. Basic Proficiency in Spanish I. 4 Hours**

Development of basic communication and intercultural skills in reading, listening, writing, and speaking through extensive practice in language use. Admission is restricted to those who have not studied Spanish or have placed into this course by examination.

### **SPN 131. Intensive Fundamental Spanish. 2 Hours**

Intensive development of fundamental communication and intercultural skills in reading, listening, writing, and speaking through extensive practice in language use. Admission restricted to those who have previous experience with the language and place into this course by examination. Credit granted for only ONE of the following: SPN 101 or SPN 131.

### **SPN 141. Basic Proficiency in Spanish II. 4 Hours**

Further development of fundamental communication and intercultural skills in reading, listening, writing, and speaking through extensive practice in language use. Prerequisite(s): (SPN 101 or SPN 131) or placement by examination.

### **SPN 201. Intermediate Spanish I. 3 Hours**

Intensive development of the basic principles of Spanish through writing and conversation, stressing fluency. Language laboratory required. Successful completion of this course includes the demonstration of the proficiency level required by the College of Arts and Sciences' Liberal Studies Curriculum. Prerequisite(s): SPN 141.

### **SPN 202. Intermediate Spanish II. 3 Hours**

Intensive development of the basic principles of Spanish through writing and conversation, stressing fluency. Language laboratory required. Prerequisite(s): SPN 201.

### **SPN 270. Study Abroad. 1-6 Hours**

Intensive study in a foreign country whose everyday language is Spanish, treating the culture and civilization of the country. Conducted in Spanish. Available only during the summer session. Repeatable when subtitle and content change. Prerequisite(s): SPN 141 or equivalent.

### **SPN 311. Spanish Conversation I. 3 Hours**

Development of fluency in the vocabulary and idioms of the spoken language through discussion of topics related to contemporary life in the Hispanic world. Prerequisite(s): SPN 202.

### **SPN 312. Spanish Conversation II. 3 Hours**

Development of fluency in the vocabulary and idioms of the spoken language through discussion of topics related to contemporary life in the Hispanic world. Prerequisite(s): SPN 311.

### **SPN 321. Spanish Composition I. 3 Hours**

Practice in composition on a variety of topics. Systematic refinement and mastery of grammar and assimilation of stylistic patterns. Emphasis on developing facility in writing clearly and correctly in Spanish. Prerequisite(s): SPN 311 or SPN 312.

### **SPN 322. Spanish Composition II. 3 Hours**

Practice in composition on a variety of topics. Systematic refinement and mastery of grammar and assimilation of stylistic patterns. Emphasis on developing facility in writing clearly and correctly in Spanish. Prerequisite(s): SPN 321.

### **SPN 325. Commercial Spanish. 3 Hours**

Introduction to commercial correspondence as a basis for developing skills in writing Spanish business letters and other correspondence. Prerequisite(s): SPN 311 or SPN 312.

### **SPN 341. Spanish Culture & Civilization. 3 Hours**

Readings and discussions on the historical, social, political, and cultural phenomena of Spain. Conducted in Spanish. Prerequisite(s): SPN 311 or SPN 312.

### **SPN 342. Ibero-American Culture & Civilization. 3 Hours**

Readings and discussions on the historical, social, political, and cultural phenomena of Ibero-America. Conducted in Spanish. Prerequisite(s): SPN 311 or SPN 312.

### **SPN 350. Hispanic Literature in Translation. 3 Hours**

Course to acquaint students with major Spanish and Spanish-American writers and literary movements. Conducted in English. Repeatable when subtitle and content change.

**SPN 361. Survey of Spanish Literature I. 3 Hours**

Readings and analysis of the works of major Spanish authors and discussion of the principal literary trends in Spain from the Middle Ages to the twentieth century. Lectures, discussions, and assignments in Spanish. Prerequisite(s): SPN 311 or SPN 312.

**SPN 362. Survey of Spanish Literature II. 3 Hours**

Readings and analysis of the works of major Spanish authors and discussion of the principal literary trends in Spain from the Middle Ages to the twentieth century. Lectures, discussions, and assignments in Spanish. Prerequisite(s): SPN 311 or SPN 312.

**SPN 363. Survey of Spanish-American Literature I. 3 Hours**

Readings and analysis of the works of major Spanish-American authors and discussion of the principal literary trends in Spanish America from Discovery and Conquest through Realism and Naturalism. Conducted in Spanish. Prerequisite(s): SPN 311 or SPN 312.

**SPN 364. Survey of Spanish-American Literature II. 3 Hours**

Readings and analysis of the works of major Spanish-American authors and discussion of the principal literary trends in Spanish America from Modernism through the present day. Conducted in Spanish. Prerequisite(s): SPN 311 or SPN 312.

**SPN 370. Study Abroad. 1-6 Hours**

Intensive study in a foreign country whose everyday language is Spanish, treating the culture and civilization of the country. Conducted in Spanish. Available only during the summer session. Repeatable when subtitle and content change. Prerequisite(s): SPN 202.

**SPN 380. Spanish & Ibero-American Cinema. 3 Hours**

Introduction to cinematography and culture of Spanish and Ibero-American countries, emphasizing themes related to human rights (Socioeconomic, class, sexuality, gender, ethnicity), as well as critical and theoretical perspectives on films from these regions. Conducted in English. Prerequisite(s): ENG 102 or equivalent.

**SPN 440. Spanish Sociolinguistics. 3 Hours**

Analysis of the interrelations between linguistic practices and ideas in the Spanish-speaking world and the social contexts in which they develop. Topics examined include language contact, minority languages, and human rights; language policy and education planning; socially conditioned variation according to gender, class, and ethnicity; and linguistic ideologies and identities in Spain and Latin America. Conducted in Spanish. Prerequisite(s): SPN 321 or permission of department chairperson.

**SPN 450. Topics in Spanish Literature. 3 Hours**

Lectures and discussions concentrating on specialized genres, periods, or authors of Peninsular literature prior to the twentieth century. Conducted in Spanish. Repeatable when subtitle and content change. Prerequisite(s): SPN 311 or SPN 312.

**SPN 451. Topics in Spanish-American Literature. 3 Hours**

Lectures and discussions concentrating on specialized genres, periods, or authors of Spanish-American literature prior to the twentieth century. Conducted in Spanish. Repeatable when subtitle and content change. Prerequisite(s): SPN 311 or SPN 312.

**SPN 469. Spanish Linguistics. 3 Hours**

Synchronic analysis of modern Spanish language, including a contrast of the Spanish sound system, morphology, and syntax with English structures; the historical derivation of Spanish, the modern Spanish dialects (Spain and Latin America), and approaches to teaching Spanish to English speakers. Conducted in Spanish. Prerequisite(s): LNG 468; (SPN 311 or SPN 312).

**SPN 471. Topics in Spanish Literature of the Twentieth Century. 3 Hours**

Lectures and discussions concentrating on specialized periods, genres, or authors of twentieth-century Peninsular literature. Conducted in Spanish. Repeatable when subtitle and content change. Prerequisite(s): SPN 311 or SPN 312.

**SPN 472. Topics in Spanish-American Literature of the Twentieth Century. 3 Hours**

Lectures and discussions concentrating on specialized periods, genres or authors of twentieth-century Spanish-American literature. Conducted in Spanish. Repeatable when subtitle and content change. Prerequisite(s): SPN 311 or SPN 312.

**SPN 477H. Honors Thesis. 3 Hours**

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

**SPN 478H. Honors Thesis. 3 Hours**

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

**SPN 480. Spanish & Ibero-American Cinema. 3 Hours**

Introduction to cinematography and culture of Spanish and Ibero-American countries, emphasizing themes related to human rights (socioeconomic, class, sexuality, gender, ethnicity), as well as critical and theoretical perspectives on films from these regions. Conducted in Spanish. Prerequisite(s): SPN 312 or equivalent; SPN 342 recommended.

**SPN 491. Independent Study. 1-3 Hours**

Independent research project under the guidance of an instructor. Admission to project and number of semester hours require approval of chairperson. Prerequisite(s): SPN 202; permission of department chairperson.

**SPN 497. Service Learning Experience. 1-3 Hours**

Supervised service experience or project which requires the use of Spanish. Repeatable up to a total of three semester hours. Prerequisite(s): SPN 311 or equivalent.

## History

Major:

- Bachelor of Arts, History (p. 193)

Minor:

- History (p. 194)

History critically studies the past and those key values which have shaped society. The best tradition of historical study enables students to assess change over time and to create an interpretative narrative of the human experience. As an intellectual discipline, historical study includes historiography and historiographical interpretation, critical evaluation

of historical sources, and causation and contextualization. Students in historical studies courses should be able to identify what historical details are necessary to understand how change occurs and how the topic at hand relates to wider (temporal and spatial) historical frameworks.

History also provides students with a sense of perspective and with the ability to make critical judgments. Those with a sharply honed historical consciousness know that often what appears to be a simple solution to a simple problem will not work because unexpressed historical forces and traditions lie just beneath the surface. Therefore, historical consciousness helps to make the world comprehensible. To be ignorant of history is to be, in a very fundamental way, intellectually defenseless, unable to understand the workings of this or other societies. Thus all totalitarian societies have stringently controlled the study and writing of history. They recognize that a free mind needs to know its past, to debate and discuss how the world came to be as it is, in order to know what to defend and what to change and how to resist imposed ideologies.

Students majoring in history are offered a flexible curriculum that allows them to have a double major or one or more minors. Students are also strongly encouraged to develop interdisciplinary areas of concentration to meet their interests and vocational goals. Examples of areas of concentration are:

- Pre-law
- Business
- International Studies and Human Rights
- Historical Administration and Preservation
- Archival Management
- Social Sciences

History majors should consult the department's Director of Curriculum and Advising for further details.

History majors pursue professions in numerous fields including:

- Historians as Educators
  - Elementary Schools
  - Secondary Schools
  - Postsecondary Education
  - Historic Sites and Museums
- Historians as Researchers
  - Museums and Historical Organizations
  - Cultural Resources Management and Historic Preservation
  - Think Tanks
- Historians as Communicators
  - Writers and Editors
  - Journalists
  - Documentary Editors
  - Producers of Multimedia Material
- Historians as Information Managers
  - Archivists
  - Records Managers
  - Librarians
  - Information Managers
- Historians as Advocates
  - Lawyers and Paralegals
  - Litigation Support
  - Legislative Staff Work
  - Foundations
- Historians in Businesses and Associations
  - Historians as Skilled Managers in Corporations

Contract Historians

Historians and Nonprofit Associations

Students in B.A. programs can acquire teacher licensure through the dual-degree B.A. and B.S.E. program conducted in conjunction with the Department of Teacher Education in the School of Education and Health Sciences. For details consult the department chairperson.

A history minor consists of 18 semester hours.

## Faculty

Juan Santamarina, Chairperson

Distinguished Service Professor: Alexander, Palermo

Professors Emeriti: Eid, Morman, Palermo, Taylor

Professors: Amin, Bednarek, Heitmann, Schweikart, Trollinger

Associate Professors: Agnew, Cadegan, Carlson, Carter, Darrow,

Fleischmann, Flockerzie, Hume, Merithew, Santamarina

Assistant Professors: Borbonus, Reid, Roy, Sutherland

Lecturers: Bartley, Jaffe, Sextro, Uhlman, Washington

## Bachelor of Arts with a major in History (HSt) Minimum 124 Hours

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
HST 103 West and the World	
REL 103 Introduction to Religious and Theological Studies	
PHL 103 Intro To Philosophy	
ENG 100 Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>	0-3
ENG 200 Writing Seminar II	
Oral Communication	3
CMM 100 Principles of Oral Communication	
Mathematics	3
Social Science	3
Arts	3
Natural Sciences <sup>4</sup>	7
Crossing Boundaries	variable credit
Faith Traditions	
Practical Ethical Action	
Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.



**Liberal Studies Curriculum**

Creative and Performing Arts (May include CAP Arts)	3
L2 Proficiency (Proficiency in a language other than English)	0-11
Literature (May satisfy CAP Components)	3
Mathematics, excluding MTH 205 (Satisfies CAP Mathematics)	3
Natural Sciences (Satisfies CAP Natural Science)	11
Social Sciences (Includes CAP Social Science)	12

**Major Requirements**<sup>1</sup>

HST 103	West and the World	3
HST 150	Introduction to the Historian's Craft	3
HST 251	American History to 1865 <sup>2</sup>	3
or HST 252	American History Since 1865	
HST 300	Career Development in History	1
HST 301	Research Methods Seminar	3
HST 498	History Capstone Seminar (Satisfies CAP Major Capstone)	3
Select two courses from:		6
HST 220	Survey of Ancient History	
HST 260	Survey of Asian History	
HST 280	Survey of Middle Eastern History	
Select 4 HST courses (300 level) <sup>3</sup>		12
Select one HST seminar (400 level) <sup>4</sup>		3

**Breadth**

ASI 150	Introduction to the University Experience	1
Total Hours to total at least		124

<sup>1</sup> Includes CAP components.<sup>2</sup> Students who are majoring in both History and Adolescence to Young Adult (AYA) Integrated Social Studies (History and Social Science) Education in the School of Education and Allied Professions are required to take both HST 251 and HST 252, and only one non-U.S. 200-level area survey.<sup>3</sup> These electives should be distributed so that the student will have taken history (HST) electives in three geographical areas: United States, Europe, and at least one of the following: Africa, Asia, Latin America, Middle East.<sup>4</sup> Three semester hours of the seminar requirement may be achieved through the fulfillment of an experiential component earned through completion of three semester hours of HST 495 Internship.**Minor in History (hst)****History**

HST 103	West and the World	3
HST 251	American History to 1865	3
or HST 252	American History Since 1865	
Select two courses in American history (300/400 level)		6
Select two courses in Non-American history (300/400 level)		6
Total Hours		18

**First Year**

Fall	Hours Spring	Hours
ASI 150	1 ASI 120	8

ASI 110	7 HST 150	3
CMM 100	3 Language	4
Language	4	
	<b>15</b>	<b>15</b>

**Second Year**

Fall	Hours Spring	Hours
HST 251 or 252	3 HST 220, 260, or 280	3
INSS (CAP Natural Science)	4 INSS (CAP Natural Science)	4
Literature	3 Social Science	3
SSC 200 (CAP Social Science)	3 HST 301	3
Language	3 CAP Arts	3
	<b>16</b>	<b>16</b>

**Third Year**

Fall	Hours Spring	Hours
HST 300	1 Adv REL (CAP Faith Traditions)	3
Creative & Performing Arts	3 HST Major elective	3
INSS (CAP Inquiry)	3 MTH (CAP Mathematics)	3
HST Major elective	3 Social Science	3
Social Science	3 General elective	3
General Elective	2	
	<b>15</b>	<b>15</b>

**Fourth Year**

Fall	Hours Spring	Hours
Adv PHL (CAP Practical Ethical Action)	3 HST 498 (Capstone)	3
CAP Integrative	3 Diversity and Social Justice	3
HST Major elective	3 HST Major elective	3
HST Seminar	3 General elective	3
General elective	3 General elective	3
General elective	2	
	<b>17</b>	<b>15</b>

Total credit hours: 124

**Courses****HST 103. The West & the World. 3 Hours**

Survey of key themes in world history including the social, economic, cultural, political, and environmental forces that shaped the human past throughout the globe.

**HST 103H. The West & the World. 3 Hours**

Survey of key themes in world history including the social, economic, cultural, political, and environmental forces that shaped the human past throughout the globe.

**HST 150. Introduction to the Historian's Craft. 3 Hours**

Introduction for history majors to the fundamental aspects of professional history. Basic elements of this reading- and writing-intensive course include terminology, methods of critique, internal and external analysis, and interpretation. Prerequisite(s): HST 103 or equivalent.

**HST 198. History Scholars' Seminar. 3 Hours**

Study and seminar discussion of selected historical documents dealing with major events and trends in Western civilization since 1715. Open by permission only to first-year students in the Berry Scholars Program.

**HST 220. Survey of Ancient History. 3 Hours**

Survey of ancient Mediterranean, Middle Eastern, and Chinese history with emphasis on the interaction among these regions and the overall impact of antiquity. Prerequisite(s): HST 103 or equivalent.

**HST 251. American History to 1865. 3 Hours**

Survey of the development of the American nation from colonial times to 1865; political trends, economic and social foundations of American institutions. Prerequisite(s): HST 103 or equivalent.

**HST 252. American History Since 1865. 3 Hours**

Survey of the development of the nation after the Civil War, stressing social, economic, and political problems. Prerequisite(s): HST 103 or equivalent.

**HST 252H. American History Since 1865. 3 Hours**

Survey of the development of the nation after the Civil War, stressing social, economic, and political problems. Prerequisite(s): HST 103 or equivalent.

**HST 260. Survey of Asian History. 3 Hours**

Historical survey of the cultures and states of Asia, from the origins of agricultural civilization to the modern period. Prerequisite(s): HST 103 or equivalent.

**HST 280. Survey of Middle Eastern History. 3 Hours**

Historical survey of the cultures and societies of the Middle East, from the rise of Islam to the modern period. Prerequisite(s): HST 103 or equivalent.

**HST 300. Career Development in History. 1 Hour**

Exploration of career opportunities open to History majors, with special emphasis on strategic planning for a career, creating a job portfolio, and mastering the practical mechanics of job searching. Prerequisite(s): (HST 103 or equivalent); HST 301 (may be taken as a corequisite).

**HST 301. Research Methods Seminar. 3 Hours**

Historical methods, philosophy, and introductory historiography, the last based on the professor's field of specialization. Required for all history majors. Prerequisite(s): HST 103 or equivalent.

**HST 302. Identity in Ancient Greece. 3 Hours**

This course examines the history of ancient Greece from the 8th century BCE to the 5th century CE and traces the formation of a common identity among Greeks. Prerequisite(s): HST 103 or equivalent.

**HST 303. History of the Roman Republic & Empire. 3 Hours**

Survey of Roman history with emphasis on the political, social, and institutional evolution of the Roman state and the organization and structure of the Roman Empire. Prerequisite(s): HST 103 or equivalent.

**HST 303H. Hst Roman Rep&Emp. 3 Hours**

Survey of Roman history with emphasis on the political, social, and institutional evolution of the Roman state and the organization and structure of the Roman Empire. Prerequisite(s): HST 103 or equivalent.

**HST 304. Ancient History & Modern Ideology. 3 Hours**

Study of the ways in which the Classical past affects the modern world with a particular emphasis on the way in which modern thinkers and societies have used classical antiquity to envision, create, sustain and evaluate national identities and other ideologies. Prerequisite(s): HST 103 or equivalent.

**HST 305. Medieval Europe. 3 Hours**

European history from the fourth to the fifteenth century, including birth of Middle Ages; development of Christianity; Byzantine, Islamic, and Carolingian Empires; feudalism; Crusades; rise of universities; birth of national cultures. Prerequisite(s): HST 103 or equivalent.

**HST 307. Renaissance & Reformation. 3 Hours**

The development of European history from the fourteenth to the middle of the seventeenth century. Emphasis on the economic, political, social, and religious aspects of the Renaissance, Protestant Revolution, and Catholic Reformation. Prerequisite(s): HST 103 or equivalent.

**HST 308. Shakespeare's Worlds. 3 Hours**

A concentrated analysis of the various worlds created in Shakespeare's plays and their interconnection with and depiction of the major elements of the historical world of early modern England. In the process of this integrated analysis, the Historical Study and Arts Study domains will be respected and taught as separate disciplines. This course is cross-listed with ENG 363. Prerequisite(s): HST 103 or equivalent.

**HST 311. Old Regime Europe. 3 Hours**

From the later Reformation to the era of the French Revolution: intellectual and cultural development; political, economic, and social trends of the Old Regime. Prerequisite(s): HST 103 or equivalent.

**HST 312. Age of Democratic Revolutions. 3 Hours**

Historical analysis of the ideological, political, social and economic changes of the late eighteenth and early nineteenth centuries, emphasizing developments in France and Europe. Prerequisite(s): HST 103 or equivalent.

**HST 313. The Dual Revolution & its Consequences - Europe 1815-1914. 3 Hours**

Historical analysis of nineteenth century Europe emphasizing the ideological, political, economic and social consequences of the Industrial and French revolutions, commonly known as the Dual Revolution. Prerequisite(s): HST 103 or equivalent.

**HST 314. Modern Europe in Decline 1890-1945. 3 Hours**

Historical study of the decline and fall of European civilization from the eve of World War I to the end of World War II, including an examination of political, economic, social, and cultural conditions. Prerequisite(s): HST 103 or equivalent.

**HST 315. Postwar Europe 1945-1990. 3 Hours**

This course examines the history of Europe from the end of the Second World War in 1945 to the end of the Cold War in 1990. Prerequisite(s): HST 103, REL 103 or equivalent.

**HST 316. Beethoven & His Era. 3 Hours**

Survey of the music of Ludwig van Beethoven, including orchestral works and chamber music, opera, keyboard and sacred music; and a survey of the historical context in which Beethoven lived and worked - Europe and the Habsburg Empire of the late eighteenth and early nineteenth centuries, and especially Vienna, the Habsburg capital. Beethoven is the culmination of the High Classic style and also the first of a new generation of Romantic composers. Prerequisite(s): HST 103 or equivalent.

**HST 319. The British Empire. 3 Hours**

An examination of the origin, development, decline and continuing legacies of the British Empire in the 19th and 20th century. Prerequisite(s): HST 103 and as mandated by CAP.

**HST 320. European Military History. 3 Hours**

Survey of warfare on the European continent from classical Greece through World War II emphasizing military institutions, organization, weapons, and campaigns and the role of the military in society. Prerequisite(s): HST 103 or equivalent.

**HST 321. Modern France. 3 Hours**

French history from the Bourbon Restoration to the present. Emphasis on political, socio-economic, and cultural factors. Prerequisite(s): HST 103 or equivalent.

**HST 322. History of England. 3 Hours**

Major forces and trends in the history of England from the early medieval period to the present, including their influence on social history and literature. Prerequisite(s): HST 103 or equivalent.

**HST 323. Modern Germany. 3 Hours**

Analysis of the development of the German state from 1848 through the period of unification, Second Empire, Weimar Republic, Third Reich, the post-World War II Germanies, to the present. Prerequisite(s): HST 103 or equivalent.

**HST 324. Comparative Nationalism. 3 Hours**

Comparative study of the origins and consequences of national movements throughout the world. Attention given to the historiography of nationalism and the fate of the nation-state idea in a number of temporal, geographic, political and cultural settings. Prerequisite(s): HST 103 or equivalent.

**HST 325. History of Russia to 1860. 3 Hours**

History of Kievan Russia and Orthodox Christianity, the Mongol Conquest, the rise of autocracy, reforms and rebellions, revolutionary movements, and the rise of the Empire to the Crimean War. Prerequisite(s): HST 103 or equivalent.

**HST 326. Russia, The Soviet Union & Beyond 1860-Present. 3 Hours**

Social, political, and cultural history of Russia from the great reforms of the late empire, through the wars, revolutions, and reconstructions of the Soviet Period, to the present. Prerequisite(s): HST 103 or equivalent.

**HST 326H. Russia, The Soviet Union & Beyond 1860-Present. 3 Hours**

Social, political, and cultural history of Russia from the great reforms of the late empire, through the wars, revolutions, and reconstructions of the Soviet Period, to the present. Prerequisite(s): HST 103 or equivalent.

**HST 327. National Cultures of the Soviet Union & its Successor States. 3 Hours**

The history of the formation of the Soviet Union and of national and cultural relations between the Russians and their Slavic, Baltic, Caucasus, Central Asian, and Siberian neighbors. Prerequisite(s): HST 103 or equivalent.

**HST 329. American and Middle East. 3 Hours**

Study of American involvement in the Middle East from the late 18th century until the present day. Topics include political, diplomatic and military events, as well as cultural, social, and religious debates that have defined the mutual interaction between Americans and Middle Easterners. Prerequisite(s): HST 103 or equivalent.

**HST 329H. American and Middle East. 3 Hours**

Study of American involvement in the Middle East from the late 18th century until the present day. Topics include political, diplomatic and military events, as well as cultural, social, and religious debates that have defined the mutual interaction between Americans and Middle Easterners. Prerequisite(s): HST 103 or equivalent.

**HST 330. History of East Asia to 1800. 3 Hours**

Survey of East Asian history from the formation of ancient states to the establishment of the dynastic hegemonies of the seventeenth and eighteenth centuries. Analysis of social, political, and cultural change in East Asia through the intensive reading of Chinese, Japanese, and Korean primary sources in translation. Prerequisite(s): HST 103 or equivalent.

**HST 331. History of India. 3 Hours**

Survey of the development of civilization on the Indian subcontinent from the first extant records (c. 2500 BCE) to post-Independence modern India in connection with the B.A. Program in Philosophy. Prerequisite(s): HST 103 or equivalent.

**HST 332. Modern China & Japan. 3 Hours**

Study of the economic, political, social, and cultural developments of modern China and Japan from the eighteenth century to the present. Prerequisite(s): HST 103 or equivalent.

**HST 333. Modern Middle East. 3 Hours**

Survey of the Ottoman Empire, Iran, Egypt, and the modern states of the Middle East, emphasizing the development of nationalism and the area's role in international politics. Prerequisite(s): HST 103 or equivalent.

**HST 334. History of the Palestinian-Israeli Conflict. 3 Hours**

Study of the history of the Palestinian-Israeli conflict from its beginnings in the late nineteenth century up to the present, with emphasis on a variety of historical interpretations of the actions and perspectives of the different parties involved. Prerequisite(s): HST 103 or equivalent.

**HST 335. History of South Asia. 3 Hours**

Survey of the major political, religious, cultural and economic developments on the Indian subcontinent over the past 500 years. Prerequisite(s): HST 103 or equivalent.

**HST 336. History of Africa to the Nineteenth Century. 3 Hours**

Study of African history from the emergence of Africa's ancient kingdoms to the end of the trans-Atlantic slave trade in the nineteenth century. Prerequisite(s): HST 103 or equivalent.

**HST 337. History of Africa - 19th Century to Present. 3 Hours**

Emphasis: colonialism and its impact, the growth of nationalism and the problems of contemporary Africa. Prerequisite(s): HST 103 or equivalent.

**HST 338. State & Secession in South Asia. 3 Hours**

Survey of the failure of the nation-state and the rise of secessionist movements in South Asia since 1947. Prerequisite(s): HST 103 or equivalent.

**HST 339. Gandhi's India. 3 Hours**

An examination of the life and times of M.K. Gandhi, an iconic figure in South Asian History, and his legacies worldwide. Prerequisite(s): HST 103 and as mandated by CAP.

**HST 340. History of Science. 3 Hours**

Survey of the development of science from its origins in the ancient world to the present. Prerequisite(s): HST 103 or equivalent.

**HST 341. Historical Perspectives on Science, Technology & Society. 3 Hours**

Historical study with an institutional focus of how science and science-based technology have interacted with American society from the Colonial era to the present. Central to this course is the genesis of mass production, its coupling with mass distribution, and the rise of the industrial research laboratory. Primary topics include the Industrial Revolution, the revolution in transport, the introduction of new technologies in the electrical, aviation, automotive, nuclear, petrochemical, and pharmaceutical industries, and the relationship between these science-based technologies and society. Prerequisite(s): HST 103 or equivalent.

**HST 342. Environmental History of the Americas. 3 Hours**

Comparison and contrast of the histories of conservationism and environmentalism in the United States, Canada and Latin America. Prerequisite(s): HST 103 or equivalent.

**HST 343. History of Civil Engineering. 3 Hours**

Historical study of the development of civil engineering from the origins in the ancient world to the present. Prerequisite(s): HST 103 or equivalent.

**HST 344. History of Science, Technology & the Modern Corporation. 3 Hours**

Historical study of the emergence of twentieth-century science-based industry. Prerequisite(s): HST 103 or equivalent.

**HST 344H. History of Science, Technology & the Modern Corporation. 3 Hours****HST 346. History of American Aviation. 3 Hours**

This course will examine the influence of aviation on the American culture, economy, and military. It will also highlight the development of aviation/aerospace technology. Prerequisite(s): HST 103 or equivalent.

**HST 347. Sex, Race & Science. 3 Hours**

Examines the development of scientific research on sex, race, and human nature focusing especially on the biological and the human sciences. Topics will include race science, the study of sex and sexuality, evolutionary accounts of human development, and relations between science and society from 1700. Prerequisite(s): HST 103 or equivalent.

**HST 348. Life & Technology. 3 Hours**

Study of how conceptions of life and technology have been tied together in key historical periods: from the early modern era, the industrial age, and the information age. Topics include life and mechanical philosophy; energy, work and life; cybernetics; reproductive technologies and genetic engineering; bioinformatics; and automata and robots. Prerequisite(s): HST 103 or equivalent.

**HST 349. Technology & the Culture of War. 3 Hours**

Investigation of the role of invention and engineering as it has been related to defense and war throughout the ages, focusing on the interrelationship of policy, strategy, organization, and technology from a global perspective. Prerequisite(s): HST 103 or equivalent.

**HST 349H. Technology & the Culture of War. 3 Hours**

Investigation of the role of invention and engineering as it has been related to defense and war throughout the ages, focusing on the interrelationship of policy, strategy, organization, and technology from a global perspective. Prerequisite(s): HST 103 or equivalent.

**HST 350. Gay & Lesbian U.S. History. 3 Hours**

Upper level survey course which traces the history and trajectory of Gay and Lesbian communities in the U.S. Prerequisite(s): HST 103.

**HST 351. American Women's & Gender History. 3 Hours**

Historical study of the changing roles of women in American society, including examination of men's and women's gender roles and the ways in which social, cultural, political, economic, legal, and political factors shape and change gender roles. Prerequisite(s): HST 103 or equivalent.

**HST 352. History of the American Family. 3 Hours**

Survey of the historical development of American family life from the colonial period to the present. Prerequisite(s): HST 103 or equivalent.

**HST 353. History of Women in European Societies. 3 Hours**

Study of the changing roles of women in European societies from the roots of industrialization to the present. Prerequisite(s): HST 103 or equivalent.

**HST 354. History of Women & Gender in the Middle East. 3 Hours**

Study of the history of the evolving roles and status of women in Middle Eastern societies, from the early modern period to present. Prerequisite(s): HST 103 or equivalent.

**HST 355. American Urban History. 3 Hours**

An examination of the modern American city from the late 19th century to the present. The course addresses contemporary (as well as historic) social issues and problems; examines significant social issues or problems in a multidisciplinary or interdisciplinary framework; and, most importantly, brings together different disciplinary perspectives to enhance students' understanding of significant issues facing the modern American city. Prerequisite(s): HST 103; Junior Standing.

**HST 356. Comparative History of Women in the Third World. 3 Hours**

Study of the comparative histories of women in Third World societies from a global perspective, using specific case studies of women in different societies around the world. Prerequisite(s): HST 103 or equivalent.

**HST 357. Latin America in the Twentieth Century. 3 Hours**

Intensive examination of revolution and reaction in today's Latin America and the implications for those who formulate U.S. foreign policy. Prerequisite(s): HST 103 or equivalent.

**HST 358. Social & Cultural History of Latin America. 3 Hours**

Survey of social and cultural history of Latin America and the Caribbean from pre-Columbian times to the present. Emphasis on the interaction between the European colonizer and the Amerindian and African peoples of the hemisphere. Prerequisite(s): HST 103 or equivalent.

**HST 359. History of American City Planning. 3 Hours**

Historical analysis of efforts by Americans to shape the urban environment, focusing on the emergence of the discipline and profession of city planning. Includes examination of U.S. planning theories developed within a larger Atlantic community. Prerequisite(s): HST 103 or equivalent.

**HST 360. U.S. Legal & Constitutional History I. 3 Hours**

An analysis of the major developments in American legal and constitutional history from colonial beginnings through the Civil War. Emphasis on the relationship between the Constitution, the law, and lawyers, on the one hand, and America's economic, social and political developments, on the other. Prerequisite(s): HST 103 or equivalent.

**HST 361. U.S. Legal & Constitutional History II. 3 Hours**

An analysis of the major developments in American legal and constitutional history from the Reconstruction era to the present. Emphasis on the relationship between the Constitution, the law, and lawyers, on the one hand, and America's economic, social, and political developments, on the other. Prerequisite(s): HST 103 or equivalent.

**HST 365. American Films as History. 3 Hours**

Study of the development of American values, myths, institutions, and perspectives through the use of films as a primary source. Prerequisite(s): HST 103 or equivalent.

**HST 365H. American Films as History. 3 Hours**

Study of the development of American values, myths, institutions, and perspectives through the use of films as a primary source. Prerequisite(s): HST 103 or equivalent.

**HST 369. Civil War & Reconstruction. 3 Hours**

Remote and immediate causes of the Civil War; problems of North and South during the war; consequences of the war; efforts to create a new Union, 1865 to 1877; problems caused by those efforts. Prerequisite(s): HST 103 or equivalent.

**HST 370. Economic & Business History of the United States. 3 Hours**

Survey and analysis of American economic history, 1600 to present, primarily through a study of American business institutions and leaders. Includes analysis of major economic theories of history as well as case studies of entrepreneurs. Prerequisite(s): HST 103 or equivalent.



**HST 370H. Economic & Business History of the United States. 3 Hours**

Survey and analysis of American economic history, 1600 to present, primarily through a study of American business institutions and leaders. Includes analysis of major economic theories of history as well as case studies of entrepreneurs. Prerequisite(s): HST 103 or equivalent.

**HST 371. United States Working Class. 3 Hours**

History of American workers - male and female, paid and unpaid, and free and slave - from the beginning of industrialization through the twentieth century. Prerequisite(s): HST 103 or equivalent.

**HST 372. History of Religion in the United States. 3 Hours**

Survey of religion in the United States from the colonial era to the present. Particular attention to the interaction of religion with other aspects of American society and culture. Prerequisite(s): HST 103 or equivalent.

**HST 373. American Military History. 3 Hours**

Survey of American military affairs, including military, naval, and air campaigns, from early settlement to the present. Prerequisite(s): HST 103 or equivalent.

**HST 374. Ireland & America. 3 Hours**

Study of the cultural-historical background of both Scotch-Irish and Celtic Irish immigrants to America and how they influenced the varying reactions of the dominant Anglo-Saxon Protestantism of America. Prerequisite(s): HST 103 or equivalent.

**HST 374H. Ireland & America. 3 Hours****HST 375. History of United States Foreign Relations. 3 Hours**

Foundations of foreign relations since 1750; the expansion of foreign relations during the continental expansion of the nineteenth century and the beginning of the extra-continental empire in 1898; special emphasis on the emergence of multifaceted and interconnected global foreign relations after 1898. Prerequisite(s): HST 103 or equivalent.

**HST 375H. History of United States Foreign Relations. 3 Hours**

Foundations of foreign relations since 1750; the expansion of foreign relations during the continental expansion of the nineteenth century and the beginning of the extra-continental empire in 1898; special emphasis on the emergence of multifaceted and interconnected global foreign relations after 1898. Prerequisite(s): HST 103 or equivalent.

**HST 376. Social & Cultural History of the United States. 3 Hours**

Social and cultural development of the American people: growth of national spirit, impact of expansion, conflict over slavery, and problems of industrialization and urbanization. Prerequisite(s): HST 103 or equivalent.

**HST 377. Contemporary American History. 3 Hours**

The immediate background of contemporary political, social, and economic problems, beginning with the impact of World War II on the United States. Prerequisite(s): HST 103 or equivalent.

**HST 378. History of Global Immigrants to the United States. 3 Hours**

Survey of the impact immigrants have had on the social, political, cultural, and economic life in the United States from the colonial period to the present. Prerequisite(s): HST 103 or equivalent.

**HST 378H. History of Global Immigrants to the United States. 3 Hours**

Survey of the impact immigrants have had on the social, political, cultural, and economic life in the United States from the colonial period to the present. Prerequisite(s): HST 103 or equivalent.

**HST 380. Native American History. 3 Hours**

Historical and descriptive survey of the native peoples of North America. Prerequisite(s): HST 103 or equivalent.

**HST 382. History of Mexico. 3 Hours**

Survey of Mexican history from pre-Columbian civilization to the present. Prerequisite(s): HST 103 or equivalent.

**HST 382H. History of Mexico. 3 Hours**

Survey of Mexican history from pre-Columbian civilization to the present. Prerequisite(s): HST 103 or equivalent.

**HST 383. History of the Caribbean. 3 Hours**

Study of the cultural, social, economic, and political history of the islands and the northern shore of South America in modern times, stressing areas that have gained independence or autonomy. Prerequisite(s): HST 103 or equivalent.

**HST 384. Economic History of Latin America. 3 Hours**

Examination of the integration of Latin America into the world trading system and analysis of the twentieth century's successes and failures of export-led growth and industrialization. Prerequisite(s): HST 103 or equivalent.

**HST 385. The Atlantic World, 1492-1800. 3 Hours**

Comparative look at the people and cultures of Europe, Africa and the Americas who collaborated in the colonization of the Americas. Topics to be covered will include: slavery, missionary work, virgin soil epidemics, frontier wars, gender and the invention of racial categories. Prerequisite(s): HST 103 or equivalent.

**HST 386. China in Revolution. 3 Hours**

Study of the history of China's turbulent twentieth century, with a focus on the social, political and cultural impacts of the 1911 Revolution, the Communist Revolution in 1949, and the Cultural Revolution of the 1960s. Prerequisite(s): HST 103 or equivalent.

**HST 391. American Architectural History & Preservation. 3 Hours**

Career-oriented course offering a theoretical background in historical preservation and techniques used in identification, research, and recording of historic landmarks worthy of preservation as part of the community heritage. Prerequisite(s): HST 103 or equivalent.

**HST 398. History of Blacks in the United States, 1526-1900. 3 Hours**

Study of the saga of black people in the U.S. from 1526 until 1900. Prerequisite(s): HST 103 or equivalent.

**HST 399. History of Blacks in the United States Since 1900. 3 Hours**

Study of the saga of black people in the U.S. from 1900 to the present. Prerequisite(s): HST 103 or equivalent.

**HST 477H. Honors Thesis. 3 Hours**

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

**HST 478H. Honors Thesis. 3 Hours**

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

**HST 485. Seminar in American History. 3 Hours**

Reading seminar concentrating on one historical topic in American history for detailed analysis. May be repeated as topics change. Prerequisite(s): HST 103 or equivalent; HST 301 or permission of department chairperson.

**HST 486. Seminar in European History. 3 Hours**

Reading seminar concentrating on one historical topic in European history for detailed analysis. May be repeated as topics change. Prerequisite(s): HST 103 or equivalent; HST 301 or permission of department chairperson.

**HST 487. Seminar in Latin American History. 3 Hours**

A reading seminar concentrating on one historical topic in Latin American history for detailed analysis. May be repeated as topics change. Prerequisite(s): HST 103 or equivalent; HST 301 or permission of department chairperson.

**HST 488. Seminar in African History. 3 Hours**

Reading seminar concentrating on one historical topic in African history for detailed analysis. May be repeated as topics change. Prerequisite(s): HST 103 or equivalent; HST 301 or permission of department chairperson.

**HST 490. Seminar in Histography. 3 Hours**

Reading seminar concentrating on the various techniques and philosophies of history by which historians have done historical research. May be repeated as topics change. Prerequisite(s): HST 103 or equivalent; HST 301 or permission of department chairperson.

**HST 491. Seminar in Ancient History. 3 Hours**

Reading seminar concentrating on one historical topic in ancient history for detailed analysis. May be repeated as topics change. Prerequisite(s): HST 301.

**HST 492. Seminar in Asian History. 3 Hours**

Reading seminar concentrating on one historical topic in Asian history for detailed analysis. May be repeated as topics change. Prerequisite(s): HST 301.

**HST 493. Seminar in Middle Eastern History. 3 Hours**

Reading seminar concentrating on one historical topic in Middle Eastern history for detailed analysis. May be repeated as topics change. Prerequisite(s): HST 103 or equivalent; HST 301 or permission of department chairperson.

**HST 495. Internship. 3 Hours**

Practical and professional experience through work with approved organizations such as historical societies, architectural preservation boards, and business firms. Prerequisite(s): (HST 103 or equivalent); permission of supervising instructor.

**HST 496. Independent Study. 1-6 Hours**

The study of a special topic to be mutually selected by the student and a history professor. Prerequisite(s): (HST 103 or equivalent); permission of department chairperson.

**HST 497. Honors Tutorial. 1-6 Hours**

The study of a special topic to be selected by the instructor. Applicants will be admitted on the basis of academic record. May be repeated once. Prerequisite(s): HST 103 or equivalent.

**HST 498. History Capstone Seminar. 3 Hours**

Capstone seminar course required for all senior history majors as the culmination of the Common Academic Program. Explores the perspective and practices of the professional historian. Students will demonstrate the ability to work critically with primary sources resulting in a scholarly project suited to their own professional goals. History majors only. Prerequisite(s): (HST 103 or ASI 110), HST 150, HST 301.

**HST 499. Topics in History. 1-6 Hours**

Specific subtitles and descriptions to be announced in the composite and posted in the History department office. Prerequisite(s): HST 103 or equivalent.

## International Studies

- Bachelor of Arts, International Studies (p. 199)

Concentrations:

- Global Environmental Sustainability (p. 200)
- Global Migration and Economic Development (p. 201)
- International Business (p. 201)
- International Education (p. 201)
- International Journalism and New Media (p. 202)
- Peace and Global Security (p. 202)

Minor:

- International Studies (p. 202)

International studies is a multidisciplinary major designed to meet the needs of students seeking the broadly based international perspective required for successful careers in education, government, international business, law, national and homeland security, humanitarian relief, and NGOs, among others. The curriculum includes a core of required courses, a concentration, a foreign language requirement, an international and/or cross-cultural experiential component, and a senior capstone seminar. The experiential component may be satisfied through study abroad, internship, language immersion, service, or work experience. The Center for International Programs and the Center for Social Concern can assist students in identifying many of these opportunities.

A minor in international studies consists of 21 semester hours.

**International Studies Committee**

Marybeth Carlson, Director

Agnew (History), Bilocerkowycz (Political Science), Brecha (Physics), Carlson (History), Dasgupta (Anthropology), Fleischmann (History), Forbis (Sociology), Goldman (Geology), Hudson (Political Science), Krugh (Languages), MacLachlan (Music), Poe (Philosophy)

## Bachelor of Arts with a major in International Studies (INS) Minimum 124 Hours

**Common Academic Program (CAP)**

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
HST 103	West and the World
REL 103	Introduction to Religious and Theological Studies
PHL 103	Intro To Philosophy

ENG 100	Writing Seminar I <sup>2</sup>				
Second-Year Writing Seminar <sup>3</sup>		0-3			
ENG 200	Writing Seminar II				
Oral Communication		3			
CMM 100	Principles of Oral Communication				
Mathematics		3			
Social Science		3			
Arts		3			
Natural Sciences <sup>4</sup>		7			
Crossing Boundaries		variable credit			
Faith Traditions					
Practical Ethical Action					
Inquiry					
Integrative					
Advanced Study		variable credit			
Philosophy and/or Religious Studies					
Historical Studies					
Diversity and Social Justice		3			
Major Capstone		0-3			
<sup>1</sup> Completed with ASI 110 and ASI 120.					
<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.					
<sup>3</sup> Completed with ENG 200H or ASI 120.					
<sup>4</sup> Must include two different disciplines and accompanying lab.					
<b>Liberal Studies Curriculum</b>					
Creative and Performing Arts (May include CAP Arts)		3			
Literature (May include CAP Components)		3			
Mathematics, excluding MTH 205 (Satisfies CAP Mathematics)		3			
Natural Sciences (Satisfies CAP Natural Science)		11			
Social Sciences (Includes CAP Social Science)		3			
<b>Major Requirements: Foundation Requirements <sup>1</sup></b>		48			
Includes CAP Components					
ECO 204	Principles of Macroeconomics	3			
INS 499	Senior Capstone Seminar (Satisfies CAP Major Capstone)	3			
Select one course from:		3			
HST 375	History of US Foreign Relations				
POL 335	United States National Security Policy				
Select one course from:		3			
MUS 303	Introduction to Musics of the World				
PHL 358	Marxist Philosophy				
PHL 370	Political Philosophy				
REL 363	Faith & Justice				
REL 474	Women & the Global Church				
Select one course from:		3			
POL 101	Global Politics				
POL 202	Introduction to Comparative Politics				
POL 214	Introduction to International Politics				
Select one course from:		3			
ANT 306	Culture & Power				
POL 331	Nationalism & Ethnopolitics				
POL 340	Gender & International Relations				
SOC 435	Economy & Society				
Select three area studies courses from three different disciplines:		9			
ANT 352	Cultures of Latin America				
ANT 356	Cultures of Africa				
ANT 360	Cultures of South Asia				
HST 315	Postwar Europe 1945-1990				
HST 326	Russia, The Soviet Union & Beyond 1860-Present				
HST 327	National Cultures of the Soviet Union & its Successor States				
HST 329	American and Middle East				
HST 330	History of East Asia to 1800				
HST 331	History of India				
HST 332	History of Modern East Asia				
HST 333	Modern Middle East				
HST 334	History of the Palestinian-Israeli Conflict				
HST 335	Making of Modern South Asia				
HST 337	History of Africa: 19th Century to the Present				
HST 353	History of Women in European Societies				
HST 354	History of Women & Gender in the Middle East				
HST 357	Latin America in the Twentieth Century				
HST 382	History of Mexico				
HST 383	History of the Caribbean				
HST 386	China in Revolution				
PHL 355	Asian Philosophy				
PHL 363	African Philosophy				
PHL 365	Islamic Philosophy & Culture				
PHL 379	Latin America Philosophy				
POL 320	Comparative Politics: Western Europe				
POL 321	Comparative Politics: Russia & the New States				
POL 404	United States - Latin American Relations				
REL 304	Hinduism				
REL 305	Eastern Orthodoxy				
REL 306	Buddhism				
REL 307	Judaism				
REL 308	Islam				
REL 358	Liberation Theology				
REL 366	The Holocaust: Theological & Religious Responses				
VAH 320	Latin American Art				
VAH 330	Arts of Asia				
Foreign language appropriate to concentration <sup>2</sup>		6			
<b>Select one concentration from: <sup>3</sup></b>					
<b>Concentration: Global Environmental Sustainability</b>		15			
Select two courses from:		6			
ECO 435	Economics of the Environment				
(p. 199)					

ENG 342 (p. 199)	Literature and the Environment
HST 342 (p. 199)	Environmental History of the Americas
PHL 321 (p. 199)	Environmental Ethics ,Environmental Ethics
PHL 334 (p. 199)	Philosophy & Ecology
POL 371 (p. 199)	Environmental Policy
REL 472 (p. 199)	Ecology & Religion
SWK 335 (p. 199)	Social Work & Environmental Justice

Select three courses from: 9

ASI 320 (p. 199)	Cities & Energy
BIO 359 (p. 199)	Sustainability & the Biosphere <sup>4</sup>
BIO 395 (p. 199)	Global Environmental Biology
CHM 200 (p. 199)	Chemistry & Society
CHM/GEO 234 (p. 199)	Energy Resources
GEO 208 (p. 199)	Environmentl Geology
GEO 450 (p. 199)	Applied Geographic Information Systems
GEO 560 (p. 199)	Advanced Applications of Geographical Information Systems
SEE 250 (p. 199)	Introduction to Sustainability, Energy & the Environment
SEE 301 (p. 199)	Global Change & Earth Systems

**Concentration: Global Migration and Economic Development** 15

Select two courses from: 6

ACC 200 (p. 199)	Introduction to Accounting
CMM 332 (p. 199)	Publication Design
ENG 370 (p. 199)	Report & Proposal Writing
POL 361 (p. 199)	Leadership in Nongovernmental Organizations
MPA 561 (p. 199)	Introduction to Nonprofit Organizations <sup>5</sup>
MPA 562 (p. 199)	Strategic Planning for Nonprofit & Community Organizations <sup>5</sup>

Select three courses from: 9

ANT/SOC 368 (p. 199)	Immigration & Immigrants
ECO 460 (p. 199)	Economic Development & Growth

ECO 461 (p. 199)	International Economics
HST 378 (p. 199)	Global Immigration
POL 333 (p. 199)	Politics of Human Rights
POL 334 (p. 199)	Politics of Human Rights II
PHL 371 (p. 199)	Philosophy & Human Rights
REL 330 (p. 199)	Faith of the Immigrants
SOC 328 (p. 199)	Racial & Ethnic Relations
SOC 339 (p. 199)	Social Inequality
SOC 371 (p. 199)	Sociology of Human Rights
SWK 360 (p. 199)	International Social Work

**Concentration: International Business** 15

INB 302 (p. 199)	Survey of International Business	3
MGT 403 (p. 199)	Cross-Cultural Management	3

Select three courses from: 9

ACC 207 (p. 199)	Introduction to Financial Accounting
ECO 460 (p. 199)	Economic Development & Growth
ECO 461 (p. 199)	International Economics
FIN 450 (p. 199)	International Business Finance
INB 350 (p. 199)	Doing Business in Emerging Markets
INB 351 (p. 199)	Doing Business in Latin America
INB 352 (p. 199)	Doing Business in Asia
INB 353 (p. 199)	Doing Business in Europe
INB 354 (p. 199)	Doing Business in Africa
INB 357 (p. 199)	Export Management
MKT 440 (p. 199)	Global Marketing
PHL 313 (p. 199)	Business Ethics

**Concentration: International Education** 15

EDT 437 (p. 199)	Second Language Learning & Teaching	3
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ENG 466 (p. 199)	TESOL Methods for Teaching English Language Learners	3
ENG 472 (p. 199)	The Structure of English	3
ENG/LNG 468 (p. 199)	Introduction to Linguistics	3
Select one course from:		3
ANT 315 (p. 199)	Language & Culture	
CMS 316 (p. 199)	Intercultural Communication	
SWK 360 (p. 199)	International Social Work	

**Concentration: International Journalism and New Media** 15  
Select five courses from: 15

CMM 331 (p. 199)	Feature Writing	
CMM 332 (p. 199)	Publication Design	
CMM 340 (p. 199)	Fundamentals of Broadcasting	
CMM 344 (p. 199)	Multimedia Design & Production I	
CMM 350 (p. 199)	Propaganda Analysis	
CMM 355 (p. 199)	Rhetoric of Social Movements	
CMM 431 (p. 199)	Public Affairs Reporting	
CMM 432 (p. 199)	Media Law	
CMS 414 (p. 199)	Global Communication	

**Concentration: Peace and Global Security** 15  
Select three courses from: 9

CJS 336 (p. 199)	Comparative Criminal Justice	
POL 300 (p. 199)	Political Issues <sup>6</sup>	
POL 406 (p. 199)	International Law & Organization	
POL 408 (p. 199)	American Foreign Policy	
POL 452 (p. 199)	Political Violence	
Select one course from:		3
HST 320 (p. 199)	European Military History	
HST 349 (p. 199)	Technology & the Culture of War	
HST 373 (p. 199)	American Military History	
Select one course from:		3

PHL 317 (p. 199)	Ethics & Modern War	
PHL 327 (p. 199)	Philosophy of Peace	
PHL 371 (p. 199)	Philosophy & Human Rights	

**Breadth**

ASI 150	Introduction to the University Experience	1
Total Hours to total at least		124

- 1 Courses taken for the major may also count toward completion of the Common Academic Program and the Liberal Studies Curriculum.
- 2 Must be at 300 level or above and exclusive of literature, film, or culture courses. There are currently no 300 level courses offered in Arabic or Mandarin Chinese. In these cases, students are required to complete the highest level course offered. Completion satisfies the L2 requirement.
- 3 Students pursuing any concentration must take into account prerequisites or class standing restrictions.
- 4 This course counts for biology majors, but is accessible to non-majors as well.
- 5 With permission of the director of the Nonprofit & Community Leadership Certificate Program.
- 6 With permission of the INS director.

**Minor in International Studies (ins)****International Studies**

ECO 204	Principles of Macroeconomics	3
POL 214	Introduction to International Politics	3
Select one LNG course (202 level or above)		3
Select four INS courses (300/400 level) <sup>1</sup>		12
Total Hours		21

- 1 Must be from at least three different disciplines, taken from International Studies core curriculum or concentrations.

**First Year**

Fall	Hours Spring	Hours
ASI 150	1 SCI 190 & 190L	4
POL 101	3 ENG 100 (CAP Writing Seminar)	3
HST 103 (CAP Humanities)	3 PHL 103 (CAP Humanities)	3
MTH 114 or 207	3 CMM 100 (CAP Communication)	3
REL 103 (CAP Humanities)	3 Lnguage 141	4
Language 101	4	
	<b>17</b>	<b>17</b>

**Second Year**

Fall	Hours Spring	Hours
SCI 210 & 210L	4 ANT 306, POL 331, POL 340, or SOC 435	3
Inquiry	3 SCI 230	3
SSC 200	3 Adv REL or PHL	3

ENG 200	3 ECO 204	3
Language 201	3 Llanguage 202	3
	<b>16</b>	<b>15</b>

**Third Year**

<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
Arts Study	3 Literature	3
HST 375 (CAP ADV HST)	3 Area Study	3
Area Study	3 Elective	3
Language 311	3 Area Study	3
Concentration course	3 Language 300 or 400 level, Literature	3
	<b>15</b>	<b>15</b>

**Fourth Year**

<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
Concentration course	3 INS 499	3
Concentration course	3 Diversity and Social Justice	3
Integrative	3 Concentration course	3
Practical Ethical Action	3 Concentration course	3
Elective	3 Faith Traditions	3
	<b>15</b>	<b>15</b>

Total credit hours: 125

**Courses****INS 390. Model United Nations. 1 Hour**

Examination of the work and procedures of the United Nations and its constituent bodies, study of various international issues and policies of member states, as well as of parliamentary diplomatic practices such as caucusing, resolution writing, and speech making in preparation for participation in Model United Nations simulations. Prerequisite(s): Permission of instructor.

**INS 395. International Experience. 1 Hour**

Orientation for and evaluation of study abroad, internship, immersion, work, or service experience in a foreign country, organization involved in international activities, or a cross-cultural setting in the United States. Grading Option Two only.

**INS 399. Independent Study. 1-3 Hours**

Independent reading and research on an interdisciplinary topic in international studies chosen by the student in consultation with one or more faculty members. May be repeated. Prerequisite(s): Permission of program director.

**INS 477H. Honors Thesis. 3 Hours**

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

**INS 478H. Honors Thesis. 3 Hours**

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

**INS 495. International Studies Internship. 1-6 Hours**

Practical, supervised experience with an approved organization dealing with international affairs. Repeatable up to six hours. Prerequisite(s): Permission of program director.

**INS 499. Senior Capstone Seminar. 3 Hours**

Capstone seminar for International Studies seniors in which students integrate the academic and experiential components of their multidisciplinary degree program in a capstone research project. Prerequisite(s): Senior status; international experience completed; permission of program director.

**INS 499H. Senior Capstone Seminar. 3 Hours**

Capstone seminar for International Studies seniors in which students integrate the academic and experiential components of their multidisciplinary degree program in a capstone research project. Prerequisite(s): Senior status; international experience completed; permission of program director.

**Marianist Social Transformation**

The minor in Marianist social transformation offers an interdisciplinary approach to Catholic, Marianist, and Christian studies. The program allows the student to utilize the rich resources in service, teaching, and research at the University of Dayton in order to explore and investigate those topics and issues that lie at the heart of the University. Open to all, participants will benefit from the 200 year Marianist experiment in the professions and higher education. Through its courses and activities, the minor prepares distinctive graduates to carry out social transformation based upon an understanding of Catholic and Christian contributions to the arts, sciences, and the professions.

**Marianist Studies Committee**

Donald L. Pair (Office of the Dean), Coordinator  
Cadegan (History), Ensalaco (Political Science), Fitz (Ferree Professor in Social Justice), Inglis (Philosophy), K. Johnson (Religious Studies), McGrath (Religious Studies), Portier (Spearin Chair), Trollinger (History), Zukowski (Institute for Pastoral Initiatives)

**Minor in Marianist Social Transformation (MST)****Marianist Social Transformation**

MST 210	Speakers on Catholic Social Tradition	1
MST 310	Reading the Signs of the Times	3
or MST 311	Reading the Signs of the Times	
or MST 312	Reading the Signs of the Times	
Select one course from:		3
ASI 358	Christianity, Citizenship & Society	
HST 372	History of Religion in America	
PHL 327	Philosophy of Peace	
PHL 356	Christian Philosophy	

REL 363	Faith & Justice	
Select two courses from two different disciplines:		6
ASI 357	Vocation & the Arts	
ASI 371	Professional Ethics in a Global Community - Business Administration	
ASI 372	Professional Ethics in a Global Community - Education	
ASI 373	Professional Ethics in a Global Community - Engineering	
ASI 374	Professional Ethics in a Global Community - Philosophical	
ASI 375	Professional Ethics in a Global Community - Religious	
EGR 330	Engineering Design & Appropriate Technology	
ENG 323	Literature of the Christian Tradition	
ENG 384	Christianity & Modern Poetry	
HST 305	Medieval Europe	
HST 307	Renaissance & Reformation	
HST 311	Old Regime Europe	
HST 313	The Dual Revolution & its Consequences - Europe 1815-1914	
HST 358	Social & Cultural History of Latin America	
MUS 301	Music History & Literature I	
MUS 305	African-American Sacred Music	
MUS 350	Sacred Music History	
MUS 452	Contemporary Liturgical Music Repertoire	
PHL 307	Philosophy & Women	
PHL 311	Philosophy of Religion	
PHL 312	Ethics	
PHL 313	Business Ethics	
PHL 315	Medical Ethics	
PHL 316	Engineering Ethics	
PHL 319	Information Ethics	
PHL 351	Medieval Philosophy	
PHL 360	Existentialism	
POL 333	Politics of Human Rights	
POL 426	Leadership in Building Communities	
PSY 451	Psychology of Religion	
REL 323	History of Christianity I	
REL 324	History of Christianity II	
REL 358	Liberation Theology	
REL 367	Christian Ethics & Health Care Issues	
REL 368	Practical wisdom in the business world	
REL 369	Ethics by Design: Theological Ethics and Engineering	
REL 471	Women & Religion	
REL 474	Women & the Global Church	
SOC 334	Religion & Society	
SOC 339	Social Inequality	
SOC 426	Leadership in Building Communities	
VAH 450	Italian Renaissance Art	

VAH 460	Baroque Art	
Total Hours		13

## Courses

### MST 210. Speakers on Catholic Social Tradition. 1 Hour

Introduction to contemporary Marianist, Catholic, and Christian social issues as reflected in presentations made on campus by significant outside speakers. Study and discussion of texts in order to meet and evaluate speakers.

### MST 310. Reading the Signs of the Times. 3 Hours

An integrated interdisciplinary exploration of local needs in light of Catholic social tradition and Marianist educational philosophy. In the process of this integrated analysis, the Historical Study domain will be emphasized. This course is cross-listed with MST 311 and MST 312 and is the capstone for the minor. Prerequisite(s): MST 210; three courses in minor.

### MST 311. Reading the Signs of the Times. 3 Hours

An integrated interdisciplinary exploration of local needs in light of Catholic social tradition and Marianist educational philosophy. In the process of this integrated analysis, the domain of Philosophy will be emphasized. This course is cross-listed with MST 310 and MST 312 and is the capstone for the minor. Prerequisite(s): MST 210; three courses in minor.

### MST 312. Reading the Signs of the Times. 3 Hours

An integrated interdisciplinary exploration of local needs in light of Catholic social tradition and Marianist educational philosophy. In the process of this integrated analysis, the domain of Religious Studies will be emphasized. This course is cross-listed with MST 310 and MST 311 and is the capstone for the minor. Prerequisite(s): MST 210; three courses in minor.

## Mathematics

### Majors:

- Bachelor of Arts, Mathematics (p. 205)
- Bachelor of Science, Applied Mathematical Economics (p. 206)
- Bachelor of Science, Mathematics (p. 206)

### Minors:

- Actuarial Science (p. 207)
- Mathematics (p. 208)

The B.A. program in mathematics provides for a breadth of mathematical study within the context of a liberal arts degree. It may be chosen as a preparation for a professional career in business, education, law or social science. It affords the student a significant distribution of courses in the humanities and social sciences so that he or she can develop a concentration in a field other than mathematics. The student's career goals will generally suggest desirable upper level mathematics electives. For example, prospective secondary mathematics teachers should participate in the licensure program and elect courses such as MTH 370, MTH 395, and MTH 466. Students with an interest in business, law, or social science should complete the probability and statistics sequence MTH 411-MTH 412.

The B.S. program in mathematics provides a foundation for students who wish to pursue graduate studies in any area of the mathematical sciences, to enter the actuarial profession, or to enter careers where

mathematics is used in an engineering or science setting. A preparation for graduate programs in a mathematical science should include electives such as MTH 342, MTH 404 and MTH 471. Those planning on pursuing an actuarial career should take the actuarial science minor described below. To prepare for using mathematics in an applied context, some useful elective courses are MTH 403, MTH 404, and the MTH 411-MTH 412 sequence. All students pursuing a bachelor of science in mathematics are required to complete a minor in another subject.

The B.S. program in applied mathematical economics provides a foundation in economics, mathematics and statistics needed for graduate study in economics or applied statistics, or for research and technical careers in business or government service. This degree is offered jointly by the Department of Mathematics and the Department of Economics and Finance in the School of Business Administration.

The basic courses are offered every term:

MTH 168	Analytic Geometry & Calculus I	4
MTH 169	Analytic Geometry & Calculus II	4
MTH 218	Analytic Geometry & Calculus III	4
MTH 219	Applied Differential Equations	3
MTH 308	Foundations & Discrete Mathematics	3
MTH 310	Linear Algebra & Matrices	3

Most majors will take MTH 218 and MTH 308 in the same term.

The required core courses are offered at least once a year:

MTH 330	Intermediate Analysis	3
MTH 361	Introduction to Abstract Algebra	3
MTH 411	Probability & Statistics I	3
MTH 430	Real Analysis	3

However, most of the other upper-level electives for the major are offered only once every two years; thus careful planning for a student's upper-level electives should be done in consultation with the advisor. In addition, the symbolic logic course, PHL 302, is a recommended Common Academic Program course for all mathematics majors.

A minor in mathematics consists of 12 semester hours (300-400 level).

A minor in actuarial science is offered through the Department of Mathematics. This consists of courses in calculus, statistics, theory of interest, economics, and finance, and is designed to prepare the student to take the actuarial examinations in probability and financial mathematics.

## Faculty

Joe D. Mashburn, Chairperson

Distinguished Service Professor: Peterson

Professors Emeriti: Back, Friel, Gantner, Kaufflin, McCloskey, Mushenheim, Rice, Schleppi, Shaughnessy, R. Steinlage, Strange  
Professors: Abueida, Diestelkamp, Eloie, Higgins, Islam, Mashburn, Raffoul

Associate Professors: Busch, Driskell, Gorton, Hovey, Krakowski, Liu, Qumsiyeh, Usman

Assistant Professors: Brown, Kublik, Ren, Yengulalp

Lecturers: Harrison, Ober, Saintignon, Simon, L. Steinlage

## Bachelor of Arts with a major in Mathematics (mth) Minimum 124 Hours

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
HST 103	West and the World
REL 103	Introduction to Religious and Theological Studies
PHL 103	Intro To Philosophy
ENG 100	Writing Seminar I <sup>2</sup>
Second-Year Writing Seminar <sup>3</sup>	0-3
ENG 200	Writing Seminar II
Oral Communication	3
CMM 100	Principles of Oral Communication
Mathematics	3
Social Science	3
Arts	3
Natural Sciences <sup>4</sup>	7
Crossing Boundaries	variable credit
Faith Traditions	
Practical Ethical Action	
Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

### Liberal Studies Curriculum

Creative and Performing Arts (May include CAP Arts)	3
L2 Proficiency (Proficiency in a language other than English)	0-11
Literature (May include CAP Components)	3
Natural Sciences (Satisfies CAP Natural Science)	11
Social Sciences (Includes CAP Social Science)	12

### Major Requirements

MTH 168	Analytic Geometry & Calculus I (Satisfies CAP Mathematics)	4
MTH 169	Analytic Geometry & Calculus II	4
MTH 218	Analytic Geometry & Calculus III	4
MTH 308	Foundations & Discrete Mathematics	3
MTH 310	Linear Algebra & Matrices	3
MTH 330	Intermediate Analysis	3
MTH 361	Introduction to Abstract Algebra	3



MTH 411	Probability & Statistics I	3
MTH 480	Math Capstone (Satisfies CAP Major Capstone)	3
Select two MTH courses (300/400 level)		6

**Breadth**

ASI 150	Introduction to the University Experience	1
Total Hours to total at least		124

## Bachelor of Science with a major in Applied Mathematical Economics (mte) Minimum 120 Hours

**Common Academic Program (CAP)**

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>		12
HST 103	West and the World	
REL 103	Introduction to Religious and Theological Studies	
PHL 103	Intro To Philosophy	
ENG 100	Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>		0-3
ENG 200	Writing Seminar II	
Oral Communication		3
CMM 100	Principles of Oral Communication	
Mathematics		3
Social Science		3
Arts		3
Natural Sciences <sup>4</sup>		7
Crossing Boundaries		variable credit
Faith Traditions		
Practical Ethical Action		
Inquiry		
Integrative		
Advanced Study		variable credit
Philosophy and/or Religious Studies		
Historical Studies		
Diversity and Social Justice		3
Major Capstone		0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.<sup>3</sup> Completed with ENG 200H or ASI 120.<sup>4</sup> Must include two different disciplines and accompanying lab.**Science Breadth Requirements**

Satisfies CAP Natural Science		
CPS 150	Algorithms & Programming I	4
CPS 151	Algorithms & Programming II	4
Select one natural sciences group from:		8

BIO 151 & 151L & BIO 152 & BIO 152L	Concepts of Biology I: Cell & Molecular Biology and Concepts of Biology Laboratory: Cell & Molecular Biology and Concepts of Biology II: Evolution & Ecology and Concepts of Biology Laboratory II: Evolution & Ecology
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CHM 123 & 123L & CHM 124 & CHM 124L	General Chemistry and General Chemistry Laboratory and General Chemistry and General Chemistry Laboratory
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GEO 115 & 115L & GEO 116 & GEO 116L	Physical Geology and Physical Geology Laboratory and Geological History of the Earth and Geological History of the Earth Laboratory
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PHY 206 & PHY 207 & PHY 210L & PHY 211L	General Physics I - Mechanics and General Physics II - Electricity & Magnetism and General Physics Laboratory and General Physics Laboratory II
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**Major Requirements** 48

Mathematics		
MTH 168	Analytic Geometry & Calculus I (Satisfies CAP Mathematics)	4
MTH 169	Analytic Geometry & Calculus II	4
MTH 218	Analytic Geometry & Calculus III	4
MTH 308	Foundations & Discrete Mathematics	3
MTH 310	Linear Algebra & Matrices	3
MTH 330	Intermediate Analysis	3
MTH 411	Probability & Statistics I	3
MTH 412	Probability & Statistics II	3
MTH 480	Math Capstone (Satisfies CAP Major Capstone)	3
Economics		
ECO 203	Principles of Microeconomics (Satisfies CAP Crossing Boundaries: Inquiry)	3
ECO 204	Principles of Macroeconomics (Satisfies CAP Crossing Boundaries: Inquiry)	3
ECO 346	Intermediate Microeconomic Analysis	3
ECO 347	Intermediate Macroeconomic Analysis	3
ECO 441	Econometrics	3
Select one ECO course (300/400 level)		3

**Breadth**

ASI 150	Introduction to the University Experience	1
Social and Behavioral Sciences (Includes CAP Social Science)		6
Total Hours to total at least		120

## Bachelor of Science with a major in Mathematics (mth) Minimum 120 Hours

**Common Academic Program (CAP)**

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>		12
HST 103	West and the World	
REL 103	Introduction to Religious and Theological Studies	
PHL 103	Intro To Philosophy	
ENG 100	Writing Seminar I <sup>2</sup>	

Second-Year Writing Seminar <sup>3</sup>	0-3
ENG 200 Writing Seminar II	
Oral Communication	3
CMM 100 Principles of Oral Communication	
Mathematics	3
Social Science	3
Arts	3
Natural Sciences <sup>4</sup>	7
Crossing Boundaries	variable credit
Faith Traditions	
Practical Ethical Action	
Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

### Science Breadth Requirements

Computer Science (CPS 150 applies to CAP Natural Sciences)	3-4
CPS 132 Computer Programming for Engineering & Science or CPS 150 Algorithms & Programming I	
Select one natural sciences group from: (Applies to CAP Natural Science)	8
BIO 151 Concepts of Biology I: Cell & Molecular Biology & 151L and Concepts of Biology Laboratory: Cell & & BIO 152 Molecular Biology & BIO 152L and Concepts of Biology II: Evolution & Ecology and Concepts of Biology Laboratory II: Evolution & Ecology	
CHM 123 General Chemistry & 123L and General Chemistry Laboratory & CHM 124 and General Chemistry & CHM 124L and General Chemistry Laboratory	
GEO 115 Physical Geology & 115L and Physical Geology Laboratory & GEO 116 and Geological History of the Earth & GEO 116L and Geological History of the Earth Laboratory	
PHY 206 General Physics I - Mechanics & PHY 207 and General Physics II - Electricity & Magnetism & PHY 210L and General Physics Laboratory & PHY 211L and General Physics Laboratory II	
Select two courses acceptable for science majors	6

<b>Major Requirements</b>	45
MTH 168 Analytic Geometry & Calculus I (Satisfies CAP Mathematics)	4
MTH 169 Analytic Geometry & Calculus II	4
MTH 218 Analytic Geometry & Calculus III	4
MTH 219 Applied Differential Equations	3
MTH 308 Foundations & Discrete Mathematics	3
MTH 310 Linear Algebra & Matrices	3
MTH 330 Intermediate Analysis	3
MTH 361 Introduction to Abstract Algebra	3
MTH 430 Real Analysis	3
MTH 480 Math Capstone (Satisfies CAP Major Capstone)	3
Select four MTH courses (300/400 level) <sup>1</sup>	12

### Breadth

ASI 150 Introduction to the University Experience	1
Social and Behavioral Sciences (Includes CAP Social Science)	6
Total Hours to total at least	120

<sup>1</sup> Departmental approval required.

## Minor in Actuarial Science (acs)

The Minor in Actuarial Science is designed to prepare students to pass the P and FM actuarial tests. It is also designed to supply students with VEE (Validation by Educational Experience) credit in economics, corporate finance, and applied statistics.

The minor contains eight courses in mathematics for a total of 22 semester hours. One of these is a course in the theory of interest and one is a seminar which prepares students to take the P test. Mathematics majors will take all but two of the mathematics requirements for the minor as part of their major requirements.

The minor also contains eight courses in accounting, economics, and finance for a total of twenty-four semester hours. Economics and finance majors will take all of these courses as part of their major requirements. They will be able to substitute two of the mathematics courses for those that they are required to take for their major.

A total of 46 semester hours are required for the minor.

### Actuarial Science

ACC 207 Introduction to Financial Accounting	3
ECO 203 Principles of Microeconomics <sup>1</sup>	3
ECO 204 Principles of Macroeconomics <sup>1</sup>	3
ECO 410 Bus&Eco Forecasting <sup>2</sup>	3
FIN 301 Introduction to Financial Management <sup>3</sup>	3
FIN 360 Investments	3
FIN 470 Fixed Income Securities	3
FIN 480 Options & Futures Markets	3
MTH 168 Analytic Geometry & Calculus I	4
MTH 169 Analytic Geometry & Calculus II	4
MTH 218 Analytic Geometry & Calculus III	4
MTH 229 Theory of Interest	3
MTH 328 Actuarial Probability Seminar	1
MTH 411 Probability & Statistics I	3

MTH 412	Probability & Statistics II	3
Total Hours		46

<sup>1</sup> ECO 203 and ECO 204 together qualify for VEE Economics credit in Economics.

<sup>2</sup> VEE credit in Applied Statistics.

<sup>3</sup> This course counts as VEE credit in Corporate Finance.

## Minor in Mathematics (mth)

<b>Mathematics</b>		
Select four MTH courses (300/400 level)		12
Total Hours		12

- Bachelor of Arts, Mathematics
- Bachelor of Science, Applied Mathematical Economics
- Bachelor of Science, Mathematics

## Bachelor of Arts, Mathematics

### First Year

Fall	Hours Spring	Hours
ASI 150	1 MTH 169	4
MTH 168	4 Natural Science w/lab	4
Natural Science w/lab	4 REL 103, PHL 103, or HST 103 (satisfies CAP Humanities)	3
ENG 100 (satisfies CAP Writing Seminar)	3 REL 103, PHL 103, or HST 103 (satisfies CAP Humanities)	3
REL 103, PHL 103, or HST 103 (satisfies CAP Humanities)	3 Social Science (CAP)	3
	<b>15</b>	<b>17</b>

### Second Year

Fall	Hours Spring	Hours
MTH 218	4 MTH 310	3
MTH 308	3 Literature	3
CMM 100 (satisfies CAP Communication)	3 Social Science	3
ENG 200	3 Language	4
Natural Science	3 Arts	3
	<b>16</b>	<b>16</b>

### Third Year

Fall	Hours Spring	Hours
MTH 411	3 MTH 361	3
MTH elective	3 MTH elective	3
Language	4 Language	3
Social Science	3 Inquiry	3
Adv PHL/REL (PEA/FT)	3 Integrative	3
	<b>16</b>	<b>15</b>

### Fourth Year

Fall	Hours Spring	Hours
MTH 330	3 MTH 480 (capstone)	3
Social Science	3 MTH elective	3
Adv PHL/REL (PEA/FT)	3 Diversity and Social Justics	3

Adv HST	3 General elective	3
General Elective	3 General Elective	3
	<b>15</b>	<b>15</b>

Total credit hours: 125

## Bachelor of Science, Applied mathematical economics

### First Year

Fall	Hours Spring	Hours
ASI 150	1 MTH 169	4
MTH 168	4 ECO 204	3
ECO 203	3 REL 103, PHL 103, or HST 103 (satisfies CAP Humanities)	3
ENG 100 (satisfies CAP Writing Seminar)	3 REL 103, PHL 103, or HST 103 (satisfies CAP Humanities)	3
Natural Science w. Lab	4 Natural Science w/Lab	4
	<b>15</b>	<b>17</b>

### Second Year

Fall	Hours Spring	Hours
MTH 218	4 MTH 310	3
MTH 308	3 ECO 347	3
ECO 346	3 CMM 100 (satisfies CAP Communication)	3
ENG 200	3 Adv PHL/REL (PEA/FT)	3
REL 103, PHL 103, or HST 103 (satisfies CAP Humanities)	3 Social Science (CAP)	3
	<b>16</b>	<b>15</b>

### Third Year

Fall	Hours Spring	Hours
MTH 411	3 MTH 412	3
CPS 150	4 CPS 151	4
Inquiry	3 Integrative	3
Adv PHL/REL/ (PEA/FT)	3 General Elective	3
Arts	3 General Elective	3
	<b>16</b>	<b>16</b>

### Fourth Year

Fall	Hours Spring	Hours
MTH 330	3 MTH 480 (capstone)	3
ECO 441	3 ECO elective	3
Adv HST	3 Diversity and Social Justice	3
General Elective	3 General Elective (optional)	3
General Elective	1 General Elective (optional)	3
General Elective	3	
	<b>16</b>	<b>15</b>

Total credit hours: 126

## Bachelor of Science, Mathematics

### First Year

Fall	Hours Spring	Hours
ASI 150	1 MTH 169	4
MTH 168	4 REL 103, PHL 103, or HST 103	3
ENG 100	3 REL 103, PHL 103, or HST 103	3
REL 103, PHL 103, or HST 103	3 Natural Science w/lab	4
Natural Science w/ lab	4 Social Science (CAP)	3
	<b>15</b>	<b>17</b>

### Second Year

Fall	Hours Spring	Hours
MTH 218	4 MTH 219	3
MTH 308	3 Natural Science	3
ENG 200	3 MTH 310	3
CMM 100	3 Arts	3
Natural Science	3 Social Science (CAP)	3
	<b>16</b>	<b>15</b>

### Third Year

Fall	Hours Spring	Hours
MTH 330	3 MTH 361	3
MTH elective	3 MTH elective	3
CPS 132 or 150	3-4 Inquiry	3
Minor elective	3 Integrative	3
Adv PHL/REL (PEA/FT)	3 Minor elective	3
	<b>15-16</b>	<b>15</b>

### Fourth Year

Fall	Hours Spring	Hours
MTH 430	3 MTH 480	3
MTH elective	3 MTH elective	3
Adv PHL/REL (PEA/FT)	3 Minor elective	3
Minor elective	3 Diversity and Social Justice	3
Minor elective	3 Adv HST	3
	<b>15</b>	<b>15</b>

Total credit hours: 123-124

## Courses

### MTH 102. Fundamentals of Math. 3 Hours

Sets, functions and graphs, exponents, polynomials and algebraic equations, systems of equations. Prerequisite(s): One year of high school algebra.

### MTH 114. Contemporary Mathematics. 3 Hours

Study of contemporary mathematical topics and their applications. Topics may include management science, statistics, social choice, size and shape, and computer mathematics. Prerequisite(s): Two years of high school algebra.

### MTH 116. Precalculus Math. 4 Hours

Review of topics from algebra and trigonometry including polynomials, functions and graphs, exponential and logarithmic functions, trigonometric functions and identities. Prerequisite(s): Two years of high school algebra.

### MTH 128. Finite Mathematics. 3 Hours

Topics from mathematics used in business including systems of equations, inequalities, matrix algebra, linear programming and logarithms; applications to compound interest, annuities and other finance problems. Prerequisite(s): MTH 102 or sufficient college preparatory mathematics.

### MTH 129. Calculus for Business. 3 Hours

Topics from differential and integral calculus used in business; applications to optimizing financial functions, marginal functions in economics, and consumer or producer surplus. Prerequisite(s): MTH 128 or sufficient college preparatory mathematics.

### MTH 137. Calculus I with Review. 4 Hours

Introduction to the differential and integral calculus with an extensive review of algebra and trigonometry; differentiation and integration of algebraic and transcendental functions with applications. Prerequisite(s): Two years of high school algebra.

### MTH 138. Calculus I with Review. 4 Hours

Introduction to the differential and integral calculus with an extensive review of algebra and trigonometry; differentiation and integration of algebraic and transcendental functions with applications. Prerequisite(s): MTH 137.

### MTH 148. Introductory Calculus I. 3 Hours

Introduction to the differential and integral calculus; differentiation and integration of algebraic and transcendental functions with applications to the life and social sciences. Prerequisite(s): MTH 116 or equivalent.

### MTH 149. Introductory Calculus II. 3 Hours

Continuation of MTH 148. Multivariable calculus, matrices, difference equations, probability, discrete and continuous random variables, and differential equations with applications to the life and social sciences. Prerequisite(s): MTH 138 or MTH 148.

### MTH 168. Analytic Geometry & Calculus I. 4 Hours

Introduction to the differential and integral calculus; differentiation and integration of algebraic and transcendental functions with applications to science and engineering. Prerequisite(s): MTH 116 or equivalent.

### MTH 169. Analytic Geometry & Calculus II. 4 Hours

Continuation of MTH 168. Conic sections, techniques of integration with applications to science and engineering, infinite series, indeterminate forms, Taylor's theorem. Prerequisite(s): MTH 138 or MTH 168.

### MTH 169H. Analytic Geometry & Calculus II. 4 Hours

Continuation of MTH 168. Conic sections, techniques of integration with applications to science and engineering, infinite series, indeterminate forms, Taylor's theorem. Prerequisite(s): MTH 138 or MTH 168.

### MTH 204. Mathematical Concepts I. 3 Hours

First course of a two-semester sequence designed for pre-service teachers. Concepts necessary for an understanding of the structure of arithmetic and its algorithms, number patterns, sets, problem solving, percent, relation and proportion, use of calculators. Prerequisite(s): One year of high school algebra; one year of high school geometry.

### MTH 205. Mathematical Concepts II. 3 Hours

Continuation of MTH 204. Topics include probability, representing and interpreting data, the metric system, elementary geometry, geometric patterns, coordinate geometry, algebra and geometry, transformations, computer literacy. Prerequisite(s): MTH 204.



**MTH 207. Introduction to Statistics. 3 Hours**

Introduction to the concepts of statistical thinking for students whose majors do not require calculus. Methods of presenting data, including graphical methods. Using data to make decisions and draw conclusions. Basic ideas of drawing a sample and interpreting the information that it contains. Prerequisite(s): Two years of high school algebra.

**MTH 214. Mathematical Concepts for Middle School Teachers. 3 Hours**

Concepts necessary for an understanding of the arithmetic taught in both elementary and middle grades. Includes a study of the structure of arithmetic and its algorithms; problem solving; reasoning and proof; proportional reasoning; use of computers and calculators to solve problems. Prerequisite(s): Two years of high school algebra.

**MTH 215. Algebra, Functions & Graphs. 3 Hours**

Development of the algebra of various families of functions including polynomial, exponential, logarithmic, and trigonometric functions; factoring and roots; interpretation of graphs; use of calculators and data collection devices to solve problems. Prerequisite(s): MTH 214.

**MTH 216. Calculus Concepts & Applications. 3 Hours**

Develop conceptual understanding of basic calculus concepts; introduction to the notion of limit; rates of change; slopes and area computations; use of calculators and data collection devices to make predictions, estimations, and solve problems. Prerequisite(s): MTH 215.

**MTH 218. Analytic Geometry & Calculus III. 4 Hours**

Continuation of MTH 169. Solid analytic geometry, vectors and vector functions, multivariable calculus, partial derivatives, multiple integrals. Prerequisite(s): MTH 169.

**MTH 219. Applied Differential Equations. 3 Hours**

First order equations, linear equations with constant coefficients, systems of equations, the Laplace transform, numerical methods, applications. Prerequisite(s): MTH 218.

**MTH 229. Theory of Interest. 3 Hours**

Rigorous, calculus-based treatment of the Theory of Interest. Topics covered include interest, compounding, discounting, annuities, sinking funds, amortization, bonds, yield rates, and applications of these ideas and processes to problems in finance. Prerequisite(s): MTH 169.

**MTH 250. Advanced Technical Mathematics. 3 Hours**

Appropriate analytical techniques for students of engineering technology; topics include integration by parts, multivariable calculus, complex numbers, matrices and system of linear equations, and first and second order differential equations. Applications are appropriate for the engineering technology programs (circuits, vibrations, and heat transfer). Prerequisite(s): MTH 138 or MTH 168.

**MTH 266. Discrete & Finite Mathematics for Middle School Teachers. 3 Hours**

Topics in finite and discrete mathematics; linear programming; applications in finance; graph theory; mathematics of social choice; logic; use of computers and calculators to model and solve problems. Prerequisite(s): MTH 214.

**MTH 270. Geometry Concepts & Applications. 3 Hours**

Introduction to the geometry of two- and three-dimensional space; patterns in geometry; measurement systems; transformations and similarity; coordinate geometry; the algebra of geometry; trigonometry; use of dynamic computer software to explore geometric concepts. Prerequisite(s): MTH 214.

**MTH 290. Topics in Mathematics. 1-3 Hours**

Exploration of varying topics appropriate for the needs of the pre-service training of teachers of mathematics. May be repeated as topics change. Prerequisite(s): One mathematics course beyond MTH 102; permission of department chairperson and/or instructor.

**MTH 295. Historical Roots of Elementary Mathematics. 3 Hours**

Fundamental historical development of modern arithmetic, algebra, geometry, and number systems from early Egyptian, Babylonian, and Greek sources. Students may not receive credit for both this course and MTH 395. Prerequisite(s): MTH 214.

**MTH 308. Foundations & Discrete Mathematics. 3 Hours**

An introduction to proof using topics in foundational and discrete mathematics; propositional logic; number theory; sequences and recursion; set theory; relations; combinatorics; linear programming. Prerequisite(s): MTH 169.

**MTH 310. Linear Algebra & Matrices. 3 Hours**

Fundamental concepts of vector spaces, determinants, linear transformations, matrices, inner product spaces, and eigen-vectors. Offered each term. Prerequisite(s): MTH 218, MTH 308. (May be taken as corequisites).

**MTH 328. Actuarial Probability Seminar. 1 Hour**

Problem solving seminar to develop and improve skills in applied probability. This seminar will focus on actuarial applications of probability theory. Prerequisite(s): MTH 411.

**MTH 329. Actuarial Finance Seminar. 1 Hour**

Problem solving seminar to develop and improve skills in applied mathematical finance. This seminar will focus on integrating the mathematical presentation of the Theory of Interest to the field of finance. Prerequisite(s): FIN 470; MTH 229.

**MTH 330. Intermediate Analysis. 3 Hours**

Theoretical development of the calculus of a real-valued function of a real variable. Topics include the algebraic and topological properties of the real line, limits of sequences and functions, continuity, differentiability, and integration. Prerequisite(s): MTH 310.

**MTH 342. Set Theory. 3 Hours**

Elementary set theory including relations, functions, indexed families, denumerable and nondenumerable sets, cardinal and ordinal arithmetic, Zorn's Lemma, the well-ordering principle and transfinite induction. Prerequisite(s): MTH 218, MTH 308.

**MTH 343. Mathematics for Electrical & Computer Engineers. 3 Hours**

Linear algebra and matrices, complex variables, mathematical transforms and their inter-relations. Focus on mathematical theories as well as applications and an extensive use of MATLAB. Prerequisite(s): MTH 219.

**MTH 361. Introduction to Abstract Algebra. 3 Hours**

Fundamental concepts of groups, rings, integral domains and fields. Prerequisite(s): MTH 218, MTH 308.

**MTH 367. Statistical Methods I. 3 Hours**

Probability distributions including binomial, hypergeometric, Poisson, and normal. Estimation of population mean and standard deviation: Confidence intervals and tests of hypotheses using t-, Chi-square, and F-statistics. Mathematics majors enroll in MTH 411 instead of MTH 367. Prerequisite(s): MTH 149 or MTH 169.

**MTH 368. Statistical Methods II. 3 Hours**

Distribution-free methods including rank tests, sign tests, and Kolmogorov-Smirnov test. Method of least squares, correlation, linear regression, analysis of variance. Design of experiments and computer applications. Mathematics majors enroll in MTH 412 instead of 368. Prerequisite(s): MTH 367.

**MTH 370. Introduction to Higher Geometry. 3 Hours**

Projective, affine, and hyperbolic geometries using synthetic and/or analytic techniques. Prerequisite(s): MTH 218, MTH 308.

**MTH 376. Number Theory. 3 Hours**

Topics include Diophantine equations, Chinese Remainder theorem, Mobius inversion formula, quadratic residues and the Law of Quadratic Reciprocity, Gaussian integers, and integral quaternions. Prerequisite(s): MTH 218, MTH 308.

**MTH 395. Development of Mathematical Ideas. 3 Hours**

The evolution of mathematical ideas and techniques from ancient times to the present with emphasis on the Greek era. Famous people and famous problems. Chronological outline of mathematics in each of its branches along with applications. Prerequisite(s): MTH 218, MTH 308.

**MTH 403. Boundary Value Problems. 3 Hours**

Introduction to the Sturm-Liouville problem. Fourier trigonometric series, Fourier integrals, Bessel functions, and Legendre polynomials. The heat equation, wave equation, and Laplace's equation with applications. Solutions by the product method. Prerequisite(s): MTH 219, MTH 310.

**MTH 404. Complex Variables. 3 Hours**

Functions of a complex variable, conformal mapping, integration in the complex plane. Laurent series and residue theory. Prerequisite(s): MTH 219.

**MTH 411. Probability & Statistics I. 3 Hours**

Mathematical probability, random variables, Bayes' Theorem, Chebyshev's Inequality, Binomial, Poisson, and Normal probability laws, moment generating functions, limit theorems, descriptive statistics, large sample statistical inference. MTH 308 is recommended as preparation for this course. Prerequisite(s): MTH 218.

**MTH 411H. Probability & Statistics I. 3 Hours**

Mathematical probability, random variables, Bayes' Theorem, Chebyshev's Inequality, Binomial, Poisson, and Normal probability laws, moment generating functions, limit theorems, descriptive statistics, large sample statistical inference. MTH 308 is recommended as preparation for this course. Prerequisite(s): MTH 218.

**MTH 412. Probability & Statistics II. 3 Hours**

Multivariate distributions, transformations of random variables, sampling distribution theory, estimation of parameters including maximum likelihood, confidence intervals, the Neyman-Pearson lemma, tests of hypotheses, likelihood ratio tests. Prerequisite(s): MTH 411.

**MTH 430. Real Analysis. 3 Hours**

Continuation of MTH 330. Topics include the theory of convergence of sequences and series of functions in the context of metric spaces, uniform continuity, uniform convergence, and integration. Prerequisite(s): MTH 330.

**MTH 435. Advanced Multivariate Calculus. 3 Hours**

Topics include directional derivatives, chain rule, Lagrange multipliers, Taylor's formula, the mean value theorem, inverse mapping theorem, implicit function theorem, integration, Fubini's theorem, change of variables, line integrals, Green's theorem and Stoke's theorem. Prerequisite(s): MTH 310.

**MTH 440. Introduction to Mathematical Modeling. 3 Hours**

Introduction to the use of mathematical techniques and results in constructing and modifying models designed to solve problems encountered in everyday life. Computer simulation and limitations thereof, dimensional analysis, scaling and approximations at various levels are discussed. Prerequisite(s): MTH 219, MTH 310.

**MTH 441. Mathematics Clinic. 1 Hour**

Student teams will be responsible for the development and/or modification and testing of a mathematical model designed for a particular purpose. Faculty guidance. Prerequisite(s): MTH 440; permission of department chairperson.

**MTH 445. Special Topics in Mathematics. 1-3 Hours**

Lectures in specialized areas such as abstract algebra, applied mathematics, complex variables, differential forms, functional analysis, Galois theory, game theory, general topology, normed linear spaces, probability theory, real variables, topological groups. May be taken more than once. Prerequisite(s): Permission of department chairperson.

**MTH 458. Mathematical Models in Finance. 3 Hours**

Mathematical models in finance which include discrete and continuous models for stock price, interest rate model, bond pricing model, and option pricing model. Quantitative methods are introduced and employed. The methods include Black-Scholes formula, Monte-Carlo simulation, and binomial tree. Markowitz's optimal portfolio selection method is introduced and employed. Prerequisite(s): MTH 310.

**MTH 465. Linear Algebra. 3 Hours**

Vector spaces, linear transformations and matrices, determinants, inner product spaces, invariant direct-sum decomposition and the Jordan canonical form. Prerequisite(s): MTH 310.

**MTH 466. Graph Theory & Combinatorics. 3 Hours**

Graphs as algebraic structures; Eulerian, Hamiltonian, complete, connected and planar graphs. Applications include scheduling and routing problems. Discussion of algorithms for optimal or near-optimal solutions. Combinatorial topics could include generating functions, recurrence relations, Polya's theorem and Ramsey Theory. Prerequisite(s): MTH 308 or MTH 310.

**MTH 467. Combinatorial Design Theory. 3 Hours**

Topic include discussion of Latin squares, mutually orthogonal Latin squares, orthogonal and perpendicular arrays, Steiner triple systems, block designs, difference sets, and finite geometries. Prerequisite(s): MTH 308.

**MTH 471. Topology. 3 Hours**

Introduction to topological spaces and continuous functions including a study of separation and countability axioms and elementary properties of metric spaces, connected spaces, and compact spaces. Prerequisite(s): MTH 308.

**MTH 477H. Honors Thesis. 3 Hours**

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

MTH 478H. Honors Thesis. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

MTH 480. Math Capstone. 3 Hours

No description available.

MTH 490. Readings in Mathematics. 1-3 Hours

Individual study in specialized areas carried out under the supervision of a staff member. May be taken more than once. Prerequisite(s): Permission of department chairperson.

Military Science ROTC

The Department of Military Science offers the Reserve Officers Training Corps (ROTC) program on the campus, providing instruction in general military subjects applicable to all branches of the Army. The purpose of the Reserve Officers Training Corps is to develop selected college-educated men and women for positions of responsibility as officers in the active Army, the Army Reserve, and the Army National Guard.

The military science program is designed to develop a high degree of personal honor, self-reliance, and leadership and to provide the means of becoming better informed on matters of national defense. The program provides men and women who are working toward a baccalaureate degree the opportunity to become officers in the United States Army.

The four-year program is divided into a basic course<sup>1</sup> (normally first and second years) and an advanced course (normally third and fourth years), and it is offered to all students for academic credit.

The basic course emphasizes practical leadership techniques and management concepts that apply equally in both military organizations and private industry. While in this phase of the program, students, other than contracted ROTC scholarship students, have no military obligation and are simply taking ROTC courses, like any other college courses, for credit. Students who receive credit for the basic course and demonstrate a potential for becoming effective officers may continue to pursue a commission by enrolling in the advanced course.

The advanced course is designed to prepare students to be Army lieutenants by including practical work in tactics, training, management, leadership techniques, and the exercise of command. Advanced course students are paid \$450 (juniors) and \$500 (seniors) a month during the school year. During the summer between the junior and senior years, cadets enroll in a thirty day Leadership Development Assessment Course (LDAC), which allows them to apply the leadership and technical training learned in the classroom. While at LDAC, students are paid half a second lieutenant's monthly salary or about \$1200.

In addition to ROTC instruction, a student must attain an equal level of professional military education. Army officers, like other professionals, cannot be satisfied with a collection of knowledge found only in their academic field. In order to be prepared to become officers, students are required to complete a course in military history.

The minor in military science provides students with the opportunity to study the theory and practice of the military profession. The minor consists of twelve semester hours of upper-level courses.

Students desiring to minor in military science should notify their respective deans and the Department of Military Science.

The ROTC program is also available to students with three or two years remaining on campus, including graduate students. Special programs, such as ROTC summer Leader's Training Course (LTC), have been established to allow second-semester sophomores and juniors or seniors who will be going on to graduate school to participate in the military science program.

There is also a special program whereby veterans and JROTC students can receive advanced placement credit in Army ROTC. Veterans and students with high school JROTC training, with the approval of the chairperson of the Department of Military Science, may receive placement credit for part or all of the basic course. Each case will be judged individually so that the best interests of both the student and the military may be served.

Army ROTC scholarships are available to students. These scholarships cover four, three, and two-year periods and provide for full tuition and charges, \$1200 a year for books, and a tax-free subsistence allowance of \$300 a month for first year cadets, \$350 a month for sophomore cadets, \$450 a month during the junior year and \$500 a month in the senior year for up to ten months. Scholarships, which are highly competitive, are awarded to those who demonstrate outstanding scholarly, athletic and leadership ability.

<sup>1</sup> At Sinclair Community College:

MIL 122, MIL 123		
Complete UD requirements for:		
MIL 101	Leadership I	
MIL 102	Leadership II	
MIL 222, MIL 223		
Complete UD requirements for:		
MIL 201	Map Reading & Small Unit Tactics	
MIL 202	Military Leadership	

Faculty

LTC Daniel Redden, U.S. Army, Chairperson  
Professor: Redden  
Assistant Professors: Germanceri, McGough  
Instructors: Perez, Siler

Minor in Military Science (mil)

Military Science, ROTC		
MIL 301	Leading Small Organizations I	3
MIL 302	Leading Small Organizations II	3
MIL 401	Leadership Management & Staff	3
MIL 402	Applied Leadership & Management	3
Total Hours		12

## Courses

### **MIL 101. Leadership I. 1 Hour**

ROTC programs and opportunities; rappelling, leadership, communications and management skills, and rifle marksmanship. Optional field trips, field exercises, physical training, leadership laboratory and social events.

### **MIL 102. Leadership II. 1 Hour**

Rifle marksmanship, fundamentals and principles of leadership, management techniques for individual, group behavior and leadership dimensions. Optional physical training, leadership laboratory, and social events.

### **MIL 201. Map Reading & Small Unit Tactics. 2 Hours**

Study of basic map reading skills, small unit tactics, movement techniques, weapons marksmanship orientation, and survival skills. Participation in leadership laboratory and two field training exercises. Optional physical training and social events.

### **MIL 202. Military Leadership. 2 Hours**

Interactive study of the fundamentals of military leadership, ethical decision-making, effective counseling techniques, and conflict resolution. Study of the role and branches of the US Army and the role of the commissioned, warrant, and noncommissioned officer. Optional participation in leadership laboratories, field training exercises, physical fitness training, and social events.

### **MIL 301. Leading Small Organizations I. 3 Hours**

Study of the methodology, qualities, and the development of leaders through a series of practical opportunities to lead small groups, receive personal assessments, encouragement, and lead again in situations of increasing complexity. Physical training, leadership laboratory, historical field trip, social events, and field training exercises are mandatory.

### **MIL 302. Leading Small Organizations II. 3 Hours**

Study of emplacement of communications equipment and weapons system. Application of small unit tactics, land navigation-terrain association, operations orders and roles of various branches of the Army. Physical training, leadership laboratory, social events, and field training exercises are mandatory.

### **MIL 401. Leadership Management & Staff. 3 Hours**

Study of military staff functions; how to conduct meetings, briefing, and training; how to conduct various types of counseling; and effective and ineffective leadership techniques. Physical training, leadership laboratory, historical field trip, social events, and field training exercises are mandatory.

### **MIL 402. Applied Leadership & Management. 3 Hours**

Leadership and management studies in professionalism, ethics, and military justice. Various types of military correspondence and the responsibilities of an officer. Physical training, leadership laboratory, field training exercises, and social events are mandatory.

### **MIL 411. Limited War/Low Intensity Conflict. 2 Hours**

This course will identify and discuss the roles and mission of the branches found within the U.S. Army as they relate to limited war and low intensity conflicts. Historical examples of leadership in limited war/low intensity conflicts are identified and discussed. Incorporates the background and experience of resident instructors and presentations by visiting service representatives.

### **MIL 412. United States Military Today. 2 Hours**

This course will identify and discuss the roles, missions, organizational structure and equipment, tactical and strategic employment, and future trends of the Armed Services. Incorporates the background and experience of resident instructors and presentations by visiting service representatives.

### **MIL 477. Honors Thesis Project. 3 Hours**

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and departmental chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

### **MIL 477H. Honors Thesis. 3 Hours**

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and departmental chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

### **MIL 478. Honors Thesis Project. 3 Hours**

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and departmental chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved MIL 477 and approval of University Honors Program.

### **MIL 478H. Honors Thesis. 3 Hours**

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and departmental chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved MIL 477 and approval of University Honors Program.

## Music

Majors:

- Bachelor of Arts, Music-Ethnomusicology Concentration (p. 215)
- Bachelor of Arts, Music-Jazz Studies Concentration (p. 216)
- Bachelor of Arts, Music-Music Studies Concentration (p. 217)
- Bachelor of Music, Music Composition (p. 217)
- Bachelor of Music, Music Education-Instrumental Concentration (p. 218)
- Bachelor of Music, Music Education-Vocal Concentration (p. 220)
- Bachelor of Music, Music Performance (p. 221)
- Bachelor of Music, Music Therapy (p. 222)



**Certificate:**

- Church Music (p. 223)

**Minor:**

- Music (p. 223)
- Music Technology (p. 224)

Music is our passion. We help each student discover the transformative power of music and develop musical interests, talents and skills that they will use to change the world. The Department's goals include the following:

- To help students develop their unique musical potential as performer, composer, scholar, teacher, therapist, listener or advocate
- To provide abundant and diverse opportunities for group and individualized music learning
- To connect students and faculty with local and global resources
- To develop musical partnerships that reflect the University's motto: Learn, Lead, and Serve
- To cultivate a safe, respectful, inter-culturally responsive, and stimulating environment that supports student and faculty development (*College of Arts and Sciences Diversity Vision Statement, October 2009*)
- To prepare students through music with essential 21<sup>st</sup> century skills to meet the changing needs of a global society

The Department of Music offers an outstanding and diverse undergraduate curriculum for music majors and non-music majors in a strong liberal arts setting. Faculty are engaged in the process of evaluating and revising existing courses and developing new ones to meet the general education requirements of the Common Academic Program (CAP) that is based on interdisciplinary content and teaching. Foundational ideas of the CAP include learner-centered teaching, education in the Catholic Marianist tradition, and integrative learning. The CAP student learning outcomes are based on UD's Habits of Inquiry, including scholarship, faith traditions, diversity, community, practical wisdom, critical evaluation of our times, and vocation.

The Department of Music is a member of the National Association of Schools of Music, which accredits its degree programs and curricula. In addition, the music education degree program is approved by the State of Ohio and the music therapy degree program by the American Music Therapy Association.

The Department of Music has numerous performing ensembles open to all students:

- University Chorale
- Choral Union
- Opera Workshop
- Ebony Heritage Singers
- World Music Choir
- Hands in Harmony Signing Choir
- University Orchestra
- Symphonic Wind Ensemble
- University Concert Band
- "Pride of Dayton" Marching Band
- Flyer Pep Band
- Percussion Ensemble

- Javanese Gamelan
- Early Music Ensemble
- Dayton Jazz Ensemble
- University Jazz Band
- Flyer Jazz Lab Band
- Winter Drum Line
- Chamber music groups
- Jazz Combo

The Department of Music offers the five degree programs listed below. Those majoring in the Bachelor of Arts with a major in Music (MUS) may choose from three concentration areas: Ethnomusicology, Jazz Studies or Music Studies.

- Bachelor of Arts with a major in Music (MUS)
- Bachelor of Music with a major in Composition (MUC)
- Bachelor of Music with a major in Music Education (MUE) (Instrumental or Vocal Concentrations)
- Bachelor of Music with a major in Performance (MUP)
- Bachelor of Music with a major in Music Therapy (MUT)

All prospective music students must be admitted to the University of Dayton by the Office of Admission and accepted through an audition process that includes the following:

1. Submission to the Department of Music two letters of recommendation from their high school music teachers and/or performance teachers and
2. Successful completion of a performance audition in person. Specific information regarding audition requirements and dates is available by calling the department office and visiting the department website (<http://www.udayton.edu/artssciences/music>).

The Department of Music offers a minor in music and a minor in music technology for non-music majors and a church music certificate.

Transfer students pursuing a major in MUC, MUP, or MUT must complete at least 24 of the required semester hours in the Department of Music while in residence at the University of Dayton. Transfer students pursuing a major in MUE must complete at least 20 of the required semester hours in the Department of Music while in residence at the University of Dayton. Transfer students pursuing a music minor must complete at least 12 of the required semester hours in the Department of Music while in residence.

**Faculty**

Sharon Davis Gratto, Chairperson

Professors Emeriti: Benedum, Sandness, Snyder

Professors: Chenoweth, Cox, Gardstrom, Gratto, Hartley, Magnuson, Street

Associate Professors: Morris, Reynolds

Assistant Professors: Daniel-Cox, Dorf, Jones, MacLachlan, Rush

Lecturers: Hiller, Lehman, Kim, Kizer

Artists-in-Residence: Arnow, Benjamin, Farris, Leslie, McCutcheon, Sievers, Wells

## BACHELOR OF MUSIC WITH A MAJOR IN MUSIC-ETHNOMUSICOLOGY CONCENTRATION (mus) MINIMUM 124 HOURS

The Bachelor of Arts with a major in Music (MUS) with a concentration in Ethnomusicology focuses on the diversity of the world's musical traditions. Students will participate in both the Western European classical music tradition (in private lessons and in choral or instrumental ensembles) and in musics from across the globe, including Black gospel, Javanese gamelan, American jazz and African choral singing. They will study European music theory in addition to transcription of unwritten musics. They will learn to analyze music in culture by studying anthropology as well, and will ultimately complete a minor in Anthropology. Students will conduct ethnographic fieldwork in order to become conversant with the essential research methods of ethnomusicology and anthropology, and during their senior year will complete a two-semester capstone project based on their fieldwork. To take advantage of the diverse academic environment at the University of Dayton, students are encouraged to complete a second major within another discipline.

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
HST 103 West and the World	
REL 103 Introduction to Religious and Theological Studies	
PHL 103 Intro To Philosophy	
ENG 100 Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>	0-3
ENG 200 Writing Seminar II	
Oral Communication	3
CMM 100 Principles of Oral Communication	
Mathematics	3
Social Science	3
Arts	3
Natural Sciences <sup>4</sup>	7
Crossing Boundaries	variable credit
Faith Traditions	
Practical Ethical Action	
Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

### Liberal Studies Curriculum

Creative and Performing Arts, including Music (May include CAP Arts)	3
L2 Proficiency (Proficiency in a language other than English)	0-11
Literature ( May include CAP Components)	3
Mathematics, excluding MTH 205 (Satisfies CAP Mathematics)	3
Natural Sciences (Satisfies CAP Natural Science)	11
Social Sciences	12
ANT 150 Cultural Anthropology	
ANT 306 Culture & Power	
SOC 101 Principles of Sociology	
SOC 394 Popular Culture in Society	

### Major Requirements

MUS 200 Recital Attendance (7 semesters)	0
MUS 241 Keyboard Competency I	0
MUS 242 Keyboard Competency II	0
MUS 250 Second Year Review	0
MUS 480 Capstone Project Seminar (With MUS 481, satisfies CAP Major Capstone)	1
MUS 481 Capstone Project & Presentation	1
Ensembles <sup>1</sup>	8
MUS 390 Ensembles	
MUS 491 University Orchestra or MUS 492 Symponic Wind Ensemble or MUS 493 University Chorale	
Music History and Literature	9
MUS 301 Music History & Literature I (Satisfies CAP Integrative, and Advanced Historical Studies)	
MUS 302 Music History & Literature II	
MUS 303 Introduction to Musics of the World (Satisfies CAP Arts, and Diversity and Social Justice)	
Music Theory and Aural Skills	18
MUS 111 Theory of Music I	
MUS 112 Theory of Music II	
MUS 113 Aural Skills I	
MUS 114 Aural Skills II	
MUS 211 Theory of Music III	
MUS 212 Theory of Music IV	
MUS 213 Aural Skills III	
MUS 214 Aural Skills IV	
MUS 217 Listening & Transcription Skills	
Performance studies <sup>2</sup>	8
MUS 399 Performance Studies or MUS 499 Performance Studies	

### Breadth

ASI 150 Introduction to the University Experience	1
Supporting Social Science	9
ANT 352 Cultures of Latin America	
ANT 356 Cultures of Africa	

ANT 360	Cultures of South Asia	
Academic electives to total at least		124

<sup>1</sup> Must include at least one semester of Ebony Heritage Singers (1), World Music Choir (.5), Gamelan (.5), Choral Union (1), Marching Band (1), and University Jazz Bands (1), for a total of 6 credits. Must also include two semesters of MUS 491 University Orchestra (1) or MUS 492 Symphonic Wind Ensemble (1) or MUS 493 University Chorale (1); MUS 390-level ensembles may be substituted for MUS 491, 492, or 493 if necessary, with the approval of the student's academic advisor.

<sup>2</sup> May include MUS 296-297 as needed.

## Bachelor of Arts with a major in Music-Jazz Studies Concentration (MUS) Minimum 124 Hours

The Bachelor of Arts (BA) with a concentration in Jazz Studies focuses on the musical and historical elements of jazz. Students will study:

- Jazz improvisation
- Jazz performance
- Jazz theory
- Jazz history
- Jazz composition and arranging.

Students also participate in both large and small jazz ensembles, which provide the opportunity to become skilled in the art of practice and performance of jazz. To take advantage of the diverse academic environment at the University of Dayton, students are encouraged to earn a minor or to complete a second major within another discipline.

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
HST 103 West and the World	
REL 103 Introduction to Religious and Theological Studies	
PHL 103 Intro To Philosophy	
ENG 100 Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>	0-3
ENG 200 Writing Seminar II	
Oral Communication	3
CMM 100 Principles of Oral Communication	
Mathematics	3
Social Science	3
Arts	3
Natural Sciences <sup>4</sup>	7
Crossing Boundaries	variable credit
Faith Traditions	
Practical Ethical Action	
Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	

### Historical Studies

Diversity and Social Justice	3
Major Capstone	0-3

- <sup>1</sup> Completed with ASI 110 and ASI 120.
- <sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.
- <sup>3</sup> Completed with ENG 200H or ASI 120.
- <sup>4</sup> Must include two different disciplines and accompanying lab.

### Liberal Studies Curriculum

Creative and Performing Arts, including MUS (May include CAP Arts)	2
L2 Proficiency (Proficiency in a language other than English)	0-11
Literature (May include CAP Components)	3
Mathematics, excluding MTH 205 (Satisfies CAP Mathematics)	3
Natural Sciences (Satisfies CAP Natural Science)	11
Social Sciences (Includes CAP Social Science)	12

### Major Requirements

MUS 200	Recital Attendance (7 semesters)	0
MUS 241	Keyboard Competency I	0
MUS 242	Keyboard Competency II	0
MUS 250	Second Year Review	0
MUS 480	Capstone Project Seminar (With MUS 481, satisfies CAP Major Capstone)	1
MUS 481	Capstone Project & Presentation	1
Ensembles		6
MUS 390	Ensembles <sup>1</sup>	
MUS 494	Dayton Jazz Ensemble	
Music History and Literature		9
(MUS 301, MUS 302 satisfy CAP Integrative, and Advanced Historical Studies. MUS 303 satisfies CAP Arts, and Diversity and Social Justice.)		
MUS 301	Music History & Literature I	
or MUS 302	Music History & Literature II	
MUS 303	Introduction to Musics of the World	
MUS 306	History of American Jazz	
Music Theory and Aural Skills		14
MUS 111	Theory of Music I	
MUS 112	Theory of Music II	
MUS 113	Aural Skills I	
MUS 114	Aural Skills II	
MUS 211	Theory of Music III	
MUS 212	Theory of Music IV	
MUS 218	Popular Jazz Theory	
Jazz Performance studies		4
MUS 391	Jazz Improvisation I	
MUS 392	Jazz Improvisation II	
MUS 396	Jazz Keyboard Harmony I	
MUS 397	Jazz Keyboard Harmony II	

Performance studies <sup>2, 3</sup> 10

MUS 399	Performance Studies
or MUS 499	Performance Studies

**Breadth**

ASI 150	Introduction to the University Experience	1
Total Hours to total at least		124

<sup>1</sup> Choose from any MUS 390. See course descriptions.

<sup>2</sup> May include MUS 296-297 as needed.

<sup>3</sup> Must include MUS 391, 396, 397.

## Bachelor of Arts with a major in Music- Music Studies Concentration (mus) Minimum 124 Hours

**Common Academic Program (CAP)**

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>		12
HST 103	West and the World	
REL 103	Introduction to Religious and Theological Studies	
PHL 103	Intro To Philosophy	
ENG 100	Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>		0-3
ENG 200	Writing Seminar II	
Oral Communication		3
CMM 100	Principles of Oral Communication	
Mathematics		3
Social Science		3
Arts		3
Natural Sciences <sup>4</sup>		7
Crossing Boundaries		variable credit
Faith Traditions		
Practical Ethical Action		
Inquiry		
Integrative		
Advanced Study		variable credit
Philosophy and/or Religious Studies		
Historical Studies		
Diversity and Social Justice		3
Major Capstone		0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

**Liberal Studies Curriculum**

Creative and Performing Arts, including Music (May include CAP Arts)	3
L2 Proficiency (Proficiency in a language other than English)	0-11

Literature (May include CAP Components)	3
Mathematics, excluding MTH 205 (Satisfies CAP Mathematics)	3
Natural Sciences (Satisfies CAP Natural Science)	11
Social Sciences (Includes CAP Social Science)	12

**Major Requirements**

		45
MUS 200	Recital Attendance (7 semesters)	0
MUS 240	Fundamentals of Conducting	2
MUS 241	Keyboard Competency I	0
MUS 242	Keyboard Competency II	0
MUS 250	Second Year Review	0
MUS 480	Capstone Project Seminar (With MUS 481, satisfies CAP Major Capstone)	1
MUS 481	Capstone Project & Presentation	1
Ensembles		4
MUS 390	Ensembles <sup>1</sup>	
or MUS 491	University Orchestra	
or MUS 492	Symphonic Wind Ensemble	
or MUS 493	University Chorale	

**Music History and Literature** 9

MUS 301	Music History & Literature I (Satisfies CAP Integrative, and Advanced Historical Studies)
MUS 302	Music History & Literature II
MUS 303	Introduction to Musics of the World (Satisfies CAP Arts, and Diversity and Social Justice)

**Music Theory and Aural Skills** 16

MUS 111	Theory of Music I
MUS 112	Theory of Music II
MUS 113	Aural Skills I
MUS 114	Aural Skills II
MUS 211	Theory of Music III
MUS 212	Theory of Music IV
MUS 213	Aural Skills III
MUS 214	Aural Skills IV

**Performance studies <sup>2</sup>** 12

MUS 399	Performance Studies
or MUS 499	Performance Studies

**Breadth**

ASI 150	Introduction to the University Experience	1
Total Hours to total at least		124

<sup>1</sup> Choose from any MUS 390. See course descriptions.

<sup>2</sup> May include MUS 296-299 as needed.

## Bachelor of Music with a major in Music Composition (muc) Minimum 137 Hours

**Common Academic Program (CAP)**

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>		12
HST 103	West and the World	
REL 103	Introduction to Religious and Theological Studies	
PHL 103	Intro To Philosophy	



ENG 100	Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>		0-3
ENG 200	Writing Seminar II	
Oral Communication		3
CMM 100	Principles of Oral Communication	
Mathematics		3
Social Science		3
Arts		3
Natural Sciences <sup>4</sup>		7
Crossing Boundaries		variable credit
Faith Traditions		
Practical Ethical Action		
Inquiry		
Integrative		
Advanced Study		variable credit
Philosophy and/or Religious Studies		
Historical Studies		
Diversity and Social Justice		3
Major Capstone		0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

### BM Requirements

Mathematics, excluding MTH 205 (Satisfies CAP Mathematics)	3
Natural Sciences (Satisfies CAP Natural Science)	7
Social Sciences (Includes CAP Social Science)	6

### Major Requirements

Major Requirements		87
MUS 200	Recital Attendance (7 semesters)	0
MUS 202	Professional Development Workshop (7 semesters)	0
MUS 241	Keyboard Competency I	0
MUS 242	Keyboard Competency II	0
MUS 250	Second Year Review	0
MUS 314	Score Reading	2
MUS 450	Degree Recital (2 required. Satisfies CAP Major Capstone.)	0
Composition <sup>1</sup>		12
MUS 121	Composition I	
MUS 122	Composition I	
MUS 221	Composition II	
MUS 222	Composition II	
MUS 321	Composition III	
MUS 322	Composition III	
MUS 421	Composition IV	
MUS 422	Composition IV	
Conducting		4

MUS 240	Fundamentals of Conducting	
MUS 345	Choral Conducting	
or MUS 346	Instrumental Conducting	
Ensembles		8
MUS 491	University Orchestra <sup>2</sup>	
or MUS 492	Symphonic Wind Ensemble	
or MUS 493	University Chorale	
Music History and Literature		9
MUS 301	Music History & Literature I (Satisfies CAP Integrative, and Advanced Historical Studies)	
MUS 302	Music History & Literature II	
MUS 303	Introduction to Musics of the World (Satisfies CAP Arts, and Diversity and Social Justice)	
Music Theory and Aural Skills		16
MUS 111	Theory of Music I	
MUS 112	Theory of Music II	
MUS 113	Aural Skills I	
MUS 114	Aural Skills II	
MUS 211	Theory of Music III	
MUS 212	Theory of Music IV	
MUS 213	Aural Skills III	
MUS 214	Aural Skills IV	
Orchestration or arranging		4
MUS 316	Fundamentals of Orchestration	
or MUS 318	Fundamentals of Arranging	
MUS 416	Advanced Orchestration	
Performance Studies <sup>3</sup>		12
MUS 296	Functional Keyboard Skills I	
MUS 297	Functional Keyboard Skills II	
MUS 298	Functional Keyboard Skills III	
MUS 299	Functional Keyboard Skills IV	
MUS 399	Performance Studies	
or MUS 499	Performance Studies	
MUS electives		10
Theory and/or composition electives		10

### Breadth

ASI 150	Introduction to the University Experience	1
Non-music electives		9
Total Hours to total at least		137

<sup>1</sup> Each composition major must present one and a half recitals of original work by the senior year.

<sup>2</sup> May substitute MUS 390 with permission.

<sup>3</sup> Functional Keyboard Skills or equivalent is required.

## Bachelor of Music with a major in Music Education-INSTRUMENTAL CONCENTRATION (mue) Minimum 139 Hours

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
HST 103 West and the World	
REL 103 Introduction to Religious and Theological Studies	
PHL 103 Intro To Philosophy	
ENG 100 Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>	0-3
ENG 200 Writing Seminar II	
Oral Communication	3
CMM 100 Principles of Oral Communication	
Mathematics	3
Social Science	3
Arts	3
Natural Sciences <sup>4</sup>	7
Crossing Boundaries	variable credit
Faith Traditions	
Practical Ethical Action	
Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

### BM Requirements

Mathematics, excluding MTH 205 (Satisfies CAP Mathematics)	3
Natural Sciences (Satisfies CAP Natural Science)	7
Social Sciences (Includes CAP Social Science)	3

### Major Requirements <sup>1</sup>

MUS 200 Recital Attendance (7 semesters)	0
MUS 202 Professional Development Workshop	0
MUS 231 Introduction to Music Education	2
MUS 240 Fundamentals of Conducting	2
MUS 241 Keyboard Competency I	0
MUS 242 Keyboard Competency II	0
MUS 250 Second Year Review	0
MUS 318 Fundamentals of Arranging	2
MUS 331 Choral Music Methods	3
MUS 332 Instrumental Music Methods	3
MUS 335 Classroom Music Methods	3
MUS 340 Music Education for Students with Special Needs	2
MUS 450 Degree Recital (Satisfies CAP Major Capstone)	0
Performance Studies (7 semesters) <sup>2</sup>	14

MUS 399 Performance Studies	
Ensembles	6
MUS 390 Ensembles (1 semester)	
Select five semesters from:	
MUS 491 University Orchestra	
or MUS 492 Symponic Wind Ensemble	
or MUS 493 University Chorale	
Music History and Literature	9
MUS 301 Music History & Literature I (Satisfies CAP Integrative, and Advanced Historical Studies)	
MUS 302 Music History & Literature II	
MUS 303 Introduction to Musics of the World (Satisfies CAP Arts, and Diversity and Social Justice)	
Music Theory and Aural Skills	16
MUS 111 Theory of Music I	
MUS 112 Theory of Music II	
MUS 113 Aural Skills I	
MUS 114 Aural Skills II	
MUS 211 Theory of Music III	
MUS 212 Theory of Music IV	
MUS 213 Aural Skills III	
MUS 214 Aural Skills IV	

### Additional Requirements for Instrumental Concentration <sup>3</sup>

Ensembles	3
MUS 390 Ensembles (choral)	
Small Ensembles (4 semesters, 0.5 semester hours each)	
Music Education	9
MUS 195 Beginning Guitar Class I	
MUS 236 Voice Laboratory	
MUS 336 Woodwind Pedagogy (2 semesters)	
MUS 337 Brass Pedagogy (2 semesters)	
MUS 338 Percussion Pedagogy	
MUS 339 String Pedagogy (2 semesters)	
Select a minimum of 6 elective semester hours from:	6
MUS 233 Eurhythmics	
MUS 295 Beginning Guitar Class II	
MUS 338 Percussion Pedagogy	
MUS 345 Choral Conducting	
MUS 346 Instrumental Conducting	
MUS 381 Clinical & Educational Music Improvisation I	
MUS 399 Performance Studies (may be repeated)	
MUS 408 Diction & Literature for Singers	
MUS 430 Jazz Pedagogy	
MUS 431 Marching Band Pedagogy	

### Teacher Education

EDT 110 The Profession of Teaching	21
EDT 110L The Profession of Teaching Laboratory	
EDT 207 Child & Adolescent in Education	
EDT 207L Child & Adolescent in Education Laboratory	

EDT 305	Philosophy & History of American Education (Satisfies CAP Practical Ethical Action, and Advanced Study in Philosophy)	
EDT 479	Student Teaching- Music P-12	

**Breadth**

ASI 150	Introduction to the University Experience	1
Total Hours to total at least		139

- Students in the music education program are required to maintain a 2.5 cumulative grade point average prior to taking EDT 110; # 2.75 cumulative grade point average after completing EDT 110; and # 3.0 after completing EDT 207. GPA in professional education (EDT) must be # 2.75 after completing EDT 110; # 3.0 after completing EDT 207. Students must earn a grade of a C- or higher in all EDT courses, and a grade of S in all EDT labs prior to entry into clinical experience. Students must earn a grade of C- or higher in the following core music education courses: MUS 331, MUS 332 and MUS 335; and a 2.5 cumulative grade point average in all music courses.
- On principal instrument.
- Students will select one of two concentration areas (instrumental or vocal). Upon successful completion of the degree and the required Ohio Assessment for Educators exams, candidates will receive a Resident Educator License (Four Year, Multi-age, P-12) from the State of Ohio to teach music from pre-kindergarten through senior high school.

## Bachelor of Music with a major in Music Education-VOCAL CONCENTRATION (mue) Minimum 139 Hours

**Common Academic Program (CAP)**

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>		12
HST 103	West and the World	
REL 103	Introduction to Religious and Theological Studies	
PHL 103	Intro To Philosophy	
ENG 100	Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>		0-3
ENG 200	Writing Seminar II	
Oral Communication		3
CMM 100	Principles of Oral Communication	
Mathematics		3
Social Science		3
Arts		3
Natural Sciences <sup>4</sup>		7
Crossing Boundaries		variable credit
Faith Traditions		
Practical Ethical Action		
Inquiry		
Integrative		
Advanced Study		variable credit
Philosophy and/or Religious Studies		

**Historical Studies**

Diversity and Social Justice	3
Major Capstone	0-3

- Completed with ASI 110 and ASI 120.
- Or ENG 100A and ENG 100B, or ENG 200H, by placement.
- Completed with ENG 200H or ASI 120.
- Must include two different disciplines and accompanying lab.

**BM Requirements**

Mathematics, excluding MTH 205 (Satisfies CAP Mathematics)	3
Natural Sciences (Satisfies CAP Natural Science)	7
Social Sciences (May include CAP Social Science)	3

**Major Requirements <sup>1</sup>** 80

MUS 200	Recital Attendance (7 semesters)	0
MUS 202	Professional Development Workshop (7 semesters)	0
MUS 231	Introduction to Music Education	2
MUS 240	Fundamentals of Conducting	2
MUS 241	Keyboard Competency I	0
MUS 242	Keyboard Competency II	0
MUS 250	Second Year Review	0
MUS 318	Fundamentals of Arranging	2
MUS 331	Choral Music Methods	3
MUS 332	Instrumental Music Methods	3
MUS 335	Classroom Music Methods	3
MUS 340	Music Education for Students with Special Needs	2
MUS 450	Degree Recital (Satisfies CAP Major Capstone)	0

**Performance Studies (7 semesters) <sup>2</sup>** 14

MUS 399	Performance Studies (7 semesters) <sup>2</sup>	
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**Ensembles** 6

MUS 390	Ensembles (1 semester)	
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Select five semesters from:

MUS 491	University Orchestra	
or MUS 492	Symphonic Wind Ensemble	
or MUS 493	University Chorale	

**Music History and Literature** 9

MUS 301	Music History & Literature I (Satisfies CAP Integrative, and Advanced Historical Studies)	
MUS 302	Music History & Literature II	
MUS 303	Introduction to Musics of the World (Satisfies CAP Arts, and Diversity and Social Justice)	

**Music Theory and Aural Skills** 16

MUS 111	Theory of Music I	
MUS 112	Theory of Music II	
MUS 113	Aural Skills I	
MUS 114	Aural Skills II	
MUS 211	Theory of Music III	
MUS 212	Theory of Music IV	
MUS 213	Aural Skills III	
MUS 214	Aural Skills IV	

**Additional requirements for Vocal Concentration<sup>3</sup>**

MUS 408	Diction & Literature for Singers	2
Ensembles		1
MUS 390	Ensembles (instrumental)	
Music Education		7
MUS 195	Beginning Guitar Class I	
MUS 295	Beginning Guitar Class II	
MUS 235	Voice Pedagogy	
or MUS 236	Voice Laboratory	
MUS 237	Brass Instrument Laboratory	
MUS 238	Woodwind Instrument Laboratory	
MUS 338	Percussion Pedagogy	
MUS 339	String Pedagogy	
Select a minimum of 8 elective semester hours from:		8
MUS 233	Eurhythmics	
MUS 338	Percussion Pedagogy	
MUS 345	Choral Conducting	
MUS 346	Instrumental Conducting	
MUS 381	Clinical & Educational Music Improvisation I	
MUS 399	Performance Studies (on secondary instrument, may be repeated)	
MUS 408	Diction & Literature for Singers	
MUS 430	Jazz Pedagogy	
MUS 431	Marching Band Pedagogy	
<b>Teacher Education</b>		21
EDT 110	The Profession of Teaching	
EDT 110L	The Profession of Teaching Laboratory	
EDT 207	Child & Adolescent in Education	
EDT 207L	Child & Adolescent in Education Laboratory	
EDT 305	Philosophy & History of American Education (Satisfies CAP Practical Ethical Action, and Advanced Study in Philosophy)	
EDT 479	Student Teaching- Music P-12	

**Breadth**

ASI 150	Introduction to the University Experience	1
Total Hours to total at least		139

<sup>1</sup> Students in the music education program are required to maintain a 2.5 cumulative grade point average prior to taking EDT 110; # 2.75 cumulative grade point average after completing EDT 110; and # 3.0 after completing EDT 207. GPA in professional education (EDT) must be # 2.75 after completing EDT 110; # 3.0 after completing EDT 207. Students must earn a grade of a C- or higher in all EDT courses, and a grade of S in all EDT labs prior to entry into clinical experience. Students must earn a grade of C- or higher in the following core music education courses: MUS 331, MUS 332 and MUS 335; and a 2.5 cumulative grade point average in all music courses.

<sup>2</sup> On principal instrument.

<sup>3</sup> Students will select one of two concentration areas (instrumental or vocal). Upon successful completion of the degree and the required Ohio Assessment for Educators exams, candidates will receive a Resident Educator License (Four Year, Multi-age, P-12) from the State of Ohio to teach music from pre-kindergarten through senior high school.

**Bachelor of Music with a major in Music Performance (mup) Minimum 137 hours****Common Academic Program (CAP)**

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>		12
HST 103	West and the World	
REL 103	Introduction to Religious and Theological Studies	
PHL 103	Intro To Philosophy	
ENG 100	Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>		0-3
ENG 200	Writing Seminar II	
Oral Communication		3
CMM 100	Principles of Oral Communication	
Mathematics		3
Social Science		3
Arts		3
Natural Sciences <sup>4</sup>		7
Crossing Boundaries		variable credit
Faith Traditions		
Practical Ethical Action		
Inquiry		
Integrative		
Advanced Study		variable credit
Philosophy and/or Religious Studies		
Historical Studies		
Diversity and Social Justice		3
Major Capstone		0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

**BM Requirements**

Mathematics, excluding MTH 205 (Satisfies CAP Mathematics)	3
Natural Sciences (Satisfies CAP Natural Science)	7
Social Sciences (Includes CAP Social Science)	6

Major Requirements		87
MUS 200	Recital Attendance (7 semesters)	0
MUS 202	Professional Development Workshop (7 semesters)	0
MUS 241	Keyboard Competency I	0
MUS 242	Keyboard Competency II	0
MUS 250	Second Year Review	0
MUS 450	Degree Recital (2 required. Satisfies CAP Major Capstone.)	0
Conducting		4
MUS 240	Fundamentals of Conducting	



MUS 318	Fundamentals of Arranging	
Ensembles		8
MUS 491	University Orchestra	
or MUS 492	Symponic Wind Ensemble	
or MUS 493	University Chorale	
Music History and Literature		9
MUS 301	Music History & Literature I (Satisfies CAP Integrative, and Advanced Historical Studies)	
MUS 302	Music History & Literature II	
MUS 303	Introduction to Musics of the World (Satisfies CAP Arts, and Diversity and Social Justice)	
Music Theory and Aural Skills		16
MUS 111	Theory of Music I	
MUS 112	Theory of Music II	
MUS 113	Aural Skills I	
MUS 114	Aural Skills II	
MUS 211	Theory of Music III	
MUS 212	Theory of Music IV	
MUS 213	Aural Skills III	
MUS 214	Aural Skills IV	
Performance Studies <sup>1</sup>		36
Major area of specialization (24-32 hours)		
Minor area of specialization (4-12 hours)		
MUS electives <sup>2</sup>		14

**Breadth**

ASI 150	Introduction to the University Experience	1
Non-music electives <sup>3</sup>		3
Total Hours to total at least		137

<sup>1</sup> Performance study in major area must lead to a half junior solo recital and a full senior solo recital.

<sup>2</sup> Voice majors must take MUS 235 and MUS 408; piano majors must include MUS 405 and MUS 435; instrumental majors must take a pedagogy course in their area of specialization. Wind, string, brass and percussion majors should register for the appropriate pedagogy course in their area of performance (MUS 336-MUS 339). Majors are strongly urged to register for a Special Topics class with their performance instructor chosen to complement other performance studies.

<sup>3</sup> Voice majors must include two semesters of foreign language study.

## Bachelor of Music with a major in Music Therapy (mut) Minimum 131 Hours

**Common Academic Program (CAP)**

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>		12
HST 103	West and the World	
REL 103	Introduction to Religious and Theological Studies	
PHL 103	Intro To Philosophy	
ENG 100	Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>		0-3
ENG 200	Writing Seminar II	

Oral Communication		3
CMM 100	Principles of Oral Communication	
Mathematics		3
Social Science		3
Arts		3
Natural Sciences <sup>4</sup>		7
Crossing Boundaries		variable credit
Faith Traditions		
Practical Ethical Action		
Inquiry		
Integrative		
Advanced Study		variable credit
Philosophy and/or Religious Studies		
Historical Studies		
Diversity and Social Justice		3
Major Capstone		0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

**BM Requirements**

Mathematics (Satisfies CAP Mathematics) <sup>1</sup>	3
Natural Sciences, includes:	7
HSS 305	Human Anatomy (Applies to CAP Natural Science)
Lecture with Lab	
Social Sciences (Includes CAP Social Science)	3

**Major Requirements** 84

MUS 200	Recital Attendance (7 semesters)	0
MUS 202	Professional Development Workshop (7 semesters)	0
MUS 241	Keyboard Competency I	0
MUS 242	Keyboard Competency II	0
MUS 250	Second Year Review	0
MUS 450	Degree Recital (Satisfies CAP Major Capstone)	0
MUS 489	Music Therapy Internship <sup>2</sup>	2
Conducting and Arranging		4
MUS 240	Fundamentals of Conducting	
MUS 318	Fundamentals of Arranging	
Ensembles		6
MUS 491	University Orchestra	
or MUS 492	Symponic Wind Ensemble	
or MUS 493	University Chorale	
Music History and Literature		9
MUS 301	Music History & Literature I (Satisfies CAP Integrative, and Advanced Historical Studies)	
MUS 302	Music History & Literature II	

MUS 303	Introduction to Musics of the World (Satisfies CAP Arts, and Diversity and Social Justice)	
Music Theory and Aural Skills		16
MUS 111	Theory of Music I	
MUS 112	Theory of Music II	
MUS 113	Aural Skills I	
MUS 114	Aural Skills II	
MUS 211	Theory of Music III	
MUS 212	Theory of Music IV	
MUS 213	Aural Skills III	
MUS 214	Aural Skills IV	
Music Therapy, including core courses and practica		28
MUS 233	Eurhythmics	
MUS 282	Functional Music Therapy Skills	
MUS 285	Introduction to Music Therapy	
MUS 286	Music Therapy Methods	
MUS 287	Practicum in Music Therapy I	
MUS 288	Practicum in Music Therapy II	
MUS 289	Practicum in Music Therapy III	
MUS 290	Music Therapy Treatment Processes	
MUS 381	Clinical & Educational Music Improvisation I	
MUS 382	Clinical & Educational Music Improvisation II	
MUS 385	Music Therapy Principles	
MUS 386	Music & Psychotherapy	
MUS 387	Practicum in Music Therapy IV	
MUS 388	Practicum in Music Therapy V	
MUS 486	Research in Music Therapy	
Performance Studies <sup>3</sup>		10
MUS 399	Performance Studies	
Vocal and instrumental methods, including accompanying instruments of piano and guitar:		4
MUS 195	Beginning Guitar Class I	
MUS 295	Beginning Guitar Class II	
MUS 338	Percussion Pedagogy <sup>4</sup>	
Select one semester hour from:		
MUS 237	Brass Instrument Laboratory	
MUS 238	Woodwind Instrument Laboratory	
MUS 293	Organ Class	
Music and dance electives		5
<b>Breadth</b>		
ASI 150	Introduction to the University Experience	1
PSY 101	Introductory Psychology (Satisfies CAP Social Science)	3
PSY 351	Child Psychology	3
PSY 355	Developmental Psychopathology	3
PSY 363	Abnormal Psychology	3
Total Hours to total at least		131

- <sup>1</sup> MTH 207 recommended.
- <sup>2</sup> This internship of a minimum of 900 hours is taken after student completes all other course requirements. In order to be recommended for an internship, the student must 1) demonstrate certain skills, characteristics, and dispositions required in the music therapy profession, 2) earn a grade of C- or better in each music therapy course, and 3) have an overall grade point average of at least 2.00 and a grade point average of at least 2.50 in music, music therapy, and psychology coursework. Upon earning a grade of C- or better in an internship, the graduate is eligible to take a national certification examination to become a Music Therapist - Board Certified.
- <sup>3</sup> Performance studies on the student's principal instrument leading to a minimum of a half-recital during the junior or senior year.
- <sup>4</sup> One semester of MUS 338 must be completed for a total of one semester hour.

## Certificate in Church Music (MCh)

### Church Music

MUS 110	Fundamentals of Music <sup>1</sup>	2
MUS 350	Sacred Music History	3
MUS 351	Church Music Administration	2
MUS 390	Ensembles	1
MUS 399	Performance Studies	1-2
MUS 452	Contemporary Liturgical Music Repertoire	2
MUS 459	Church Music Internship	2
REL 446	Christian Liturgy <sup>2</sup>	3
Select one course from:		2
MUS 240	Fundamentals of Conducting	
MUS 545	Advanced Choral Conducting & Rehearsal Techniques	
Select six semester hours from:		6
MUS 318	Fundamentals of Arranging	
MUS 461	Special Topics in Church Music	
MUS 505	Teaching Music with Technology I	
MUS 506	Teaching Music with Technology II	
Total Hours		24-25

- <sup>1</sup> May substitute additional credits in performance studies or church music workshops for MUS 110.
- <sup>2</sup> Or two to three semester hours of a suitable religious studies course.

## Minor in Music (mus)

### Music

Select one track from:		22
<b>Track A:</b>		
MUS 115	Music in Theory & Practice	
MUS 116	Music in Theory & Practice	
MUS 217	Listening & Transcription Skills	
or MUS 218	Popular Jazz Theory	
MUS 301	Music History & Literature I	
MUS 302	Music History & Literature II	
Select MUS electives (8 hours) <sup>1,2</sup>		

**Track B:**

MUS 111	Theory of Music I
MUS 112	Theory of Music II
MUS 113	Aural Skills I
MUS 114	Aural Skills II
MUS 301	Music History & Literature I
MUS 302	Music History & Literature II
Select MUS electives (8 hours) <sup>1,2</sup>	
Total Hours	22

<sup>1</sup> Must include six semester hours at the 300/400 level.

<sup>2</sup> No more than two semester hours of ensemble (MUS 390, MUS 491, MUS 492, MUS 493) will count toward the minor.

## Minor in Music Technology (mTC)

**Music Technology**

Select one music theory option from: 8

**Option A**

MUS 115	Music in Theory & Practice
MUS 116	Music in Theory & Practice
MUS 217	Listening & Transcription Skills
or MUS 218	Popular Jazz Theory

**Option B**

MUS 111	Theory of Music I
MUS 112	Theory of Music II
MUS 113	Aural Skills I
MUS 114	Aural Skills II

Applied Studies <sup>1</sup> 6

MUS 399	Performance Studies
MUS 499	Performance Studies

Ensembles <sup>2</sup> 2

MUS 390	Ensembles <sup>3</sup>
MUS 491	University Orchestra
MUS 492	Symphonic Wind Ensemble
MUS 493	University Chorale

Music History and Literature 3

MUS 301	Music History & Literature I
MUS 302	Music History & Literature II
MUS 303	Introduction to Musics of the World

Music Technology 5

MUS 223	Introduction to Music Technology
MUS 323	Recording Arts & Digital Media

Total Hours 24

<sup>1</sup> Take a total of six semester hours from any combination of these courses.

<sup>2</sup> Take a total of two semester hours from any combination of these courses.

<sup>3</sup> Choose from any MUS 390. See course descriptions.

- Bachelor of Arts, Music - Music Studies Concentration (p. 225)
- Bachelor of Music, Music Composition (p. 226)
- Bachelor of Music, Music Education - Instrumental Concentration (p. 226)
- Bachelor of Music, Music Education - Vocal Concentration (p. 227)
- Bachelor of Music, Music Performance (p. 228)
- Bachelor of Music, Music Therapy (p. 228)

## bachelor of arts, music- ethnomusicology concentration

**First Year**

Fall	Hours Spring	Hours
ASI 150	1 ENG 100 (CAP Humanities)	3
HST 103, PHL 103, or REL 103 (CAP Humanities)	3 HST 103, PHL 103, or REL 103 (CAP Humanities)	3
HST 103, PHL 103, or REL 103 (CAP Humanities)	3 CMM 100	3
MUS 111	2 MUS 112	2
MUS 113	2 MUS 114	2
MUS 200	0 MUS 200	0
MUS 390, 491, 492, or 493	1 MUS 390, 491, 492, or 493	1
MUS 399	1 MUS 399	1
MUS 303 (CAP Arts & Diversity and Social Justice)	3	
	<b>16</b>	<b>15</b>

**Second Year**

Fall	Hours Spring	Hours
ANT 150	3 ANT 336	3
ENG 200	3 MUS 200	0
MUS 200	0 MUS 212	2
MUS 211	2 MUS 214	2
MUS 213	2 MUS 241	0
MUS 301 (CAP Integrative)	3 MUS 250	0
MUS 390, 491, 492, or 493	1 MUS 302 (CAP Adv Historical Study)	3
MUS 399	2 MUS 390, 491, 492, or 493	1
	MUS 399	1
	ANT 306	3
	<b>16</b>	<b>15</b>

**Third Year**

Fall	Hours Spring	Hours
INSS (CAP Natural Science)	3 INSS (CAP Natural Science)	4
Language	4 Language	4
MUS 200	0 MUS 200	0
MUS 217	2 MUS 242	0
MUS 390, 491, 492, or 493	1 MUS 399	2
MUS 399	1 MUS 390, 491, 492, or 493	1
ANT 360	3 SOC 394	3
SOC 101	3	
	<b>17</b>	<b>14</b>

- Bachelor of Arts, Music- Ethnomusicology Concentration (p. 224)
- Bachelor of Arts, Music - Jazz Studies Concentration (p. 225)

**Fourth Year**

<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
INSS (CAP Inquiry)	4 Adv PHL (CAP Practice Ethical Action)	3
Language	3 Adv REL (CAP Faith Traditions)	3
MUS 200	0 Literature (Liberal Studies)	3
MUS 390, 491, 492, or 493	1 MUS 481	1
MUS 480	1 MUS 390, 491, 492, or 493	1
MTH (CAP Mathematics)	3 SSC 200 (CAP Social Science)	3
ANT 352	3 General elective	2
	<b>15</b>	<b>16</b>

Total credit hours: 124

**bachelor of arts, music- jazz studies concentration****First Year**

<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
ASI 150	1 ENG 100 (CAP Humanities)	3
HST 103, PHL 103, or REL 103 (CAP Humanities)	3 HST 103, PHL 103, or REL 103 (CAP Humanities)	3
HST 103, PHL 103, or REL 103 (CAP Humanities)	3 Social Science	3
CMM 100	3 MUS 112	2
MUS 111	2 MUS 114	2
MUS 113	2 MUS 200	0
MUS 200	0 MUS 390 or 494	1
MUS 390 or 494	1 MUS 399	2
MUS 399	2	
	<b>17</b>	<b>16</b>

**Second Year**

<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
ENG 200	3 SSC 200 (CAP Social Science)	3
Language	4 INSS (CAP Natural Science)	3
MUS 200	0 Language	4
MUS 211	2 MUS 200	0
MUS 301 or 302 (CAP Integrative and Adv Historical Studies)	3 MUS 212	2
MUS 390 or 494	1 MUS 241	0
MUS 399	2 MUS 218	2
	MUS 250	0
	MUS 390 or 494	1
	<b>15</b>	<b>15</b>

**Third Year**

<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
Language	3 INSS (CAP Inquiry)	4
INSS (CAP Natural Science)	4 MUS 200	0
MTH (CAP Mathematics)	3 MUS 242	0
MUS 200	0 MUS 306 (CAP Arts)	3

MUS 303 (CAP Diversity & Social Justice)	3 MUS 392	1
MUS 391	1 MUS 399	2
MUS 390 or 494	1 MUS 390 or 494	1
MUS 399	1 MUS 399	1
	Social Science	3
	<b>16</b>	<b>15</b>

**Fourth Year**

<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
Adv REL (CAP Faith Traditions)	3 Adv PHL (CAP Practical Ethical Action)	3
MUS 200	0 Literature	3
MUS 396	1 MUS 397	1
MUS 399	2 MUS 481	1
MUS 480	1 General elective	3
General elective	3 Social Science	3
Social Science	3 General elective	1
General elective	2	
	<b>15</b>	<b>15</b>

Total credit hours: 124

**bachelor of arts, music- music studies concentration****First Year**

<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
ASI 150	1 ENG 100 (CAP Humanities)	3
HST 103, PHL 103, or REL 103 (CAP Humanities)	3 HST 103, PHL 103, or REL 103 (CAP Humanities)	3
HST 103, PHL 103, or REL 103 (CAP Humanities)	3 Social Science	3
CMM 100	3 MUS 112	2
MUS 111	2 MUS 114	2
MUS 113	2 MUS 200	0
MUS 200	0 MUS 390, 491, 492, or 493	1
MUS 390, 491, 492, or 493	1 MUS 399	2
MUS 399	2	
	<b>17</b>	<b>16</b>

**Second Year**

<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
ENG 200	3 SSC 200 (CAP Social Science)	3
Language	4 INSS (CAP Natural Science)	3
MUS 200	0 Language	4
MUS 211	2 MUS 200	0
MUS 213	2 MUS 212	2
MUS 241	0 MUS 214	2
MUS 390	1 MUS 242	0
MUS 390, 491, 492, or 493	1 MUS 240	2
MUS 399	2 MUS 250	0
	MUS 399	1
	<b>15</b>	<b>17</b>



**Third Year**

<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
Language	3 INSS (CAP Inquiry)	4
INSS (CAP Natural Science)	4 MUS 200	0
MTH (CAP Mathematics)	3 MUS 302 (CAP Integrative)	3
MUS 200	0 MUS 390, 491, 492, or 493	1
MUS 301 (CAP Adv Historical Studies)	3 MUS 399	1
MUS 399	2 General elective	3
	Social Science	3
	<b>15</b>	<b>15</b>

**Fourth Year**

<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
Adv REL (CAP Faith Traditions)	3 Adv PHL (CAP Practical Ethical Action)	3
MUS 200	0 Literature	3
MUS 303 (CAP Arts and Diversity & Social Justice)	3 MUS 481	1
MUS 399	2 General elective	3
MUS 480	1 Social Science	3
General elective	3 General elective	1
General elective	3	
	<b>15</b>	<b>14</b>

Total credit hours: 124

**bachelor of music, music composition****First Year**

<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
ASI 150	1 ENG 100 (CAP Humanities)	3
HST 103, PHL 103, or REL 103 (CAP Humanities)	3 HST 103, PHL 103, or REL 103 (CAP Humanities)	3
HST 103, PHL 103, or REL 103 (CAP Humanities)	3 CMM 100	3
MUS 111	2 MUS 112	2
MUS 113	2 MUS 114	2
MUS 121	1 MUS 122	1
MUS 200	0 MUS 200	0
MUS 202	0 MUS 202	0
MUS 296	1 MUS 297	1
MUS 491, 492, or 493	1 MUS 399	2
MUS 399	2 MUS 491, 492, or 493	1
Music elective	1 Music elective	1
	<b>17</b>	<b>19</b>

**Second Year**

<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
MTH (CAP Mathematics)	3 ENG 200	3
MUS 200	0 MUS 200	0
MUS 202	0 MUS 202	0
MUS 211	2 MUS 212	2
MUS 213	2 MUS 214	2
MUS 221	1 MUS 222	1
MUS 241	0 MUS 242	0
MUS 298	1 MUS 250	0

MUS 301 (CAP Adv Historical Studies)	3 MUS 299	1
MUS 399	2 MUS 302 (CAP Integrative)	3
MUS 491, 492, or 493	1 MUS Theory or Composition	2
MUS Theory or Composition	2 MUS 491, 492, or 493	1
Music elective	1 MUS 399	2
	<b>18</b>	<b>17</b>

**Third Year**

<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
MUS 200	0 MUS 200	0
MUS 202	0 MUS 202	0
MUS 240	2 MUS 303 (CAP Arts and Diversity & Social Justice)	3
MUS 321	2 MUS 316 or 318	2
MUS 314	2 MUS 322	2
MUS Theory or Composition	3 MUS 345 or 346	2
MUS 491, 492, or 493	1 MUS 491, 492, or 493	1
CAP Inquiry	3 MUS 450	0
CAP Natural Science	4 Music elective	1
	CAP Natural Science	3
	SSC 200 (CAP Social Science)	3
	<b>17</b>	<b>17</b>

**Fourth Year**

<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
Adv Religious Studies (CAP Faith Traditions)	3 Adv PHL (CAP Practical Ethical Action)	3
MUS 200	0 MUS 422	2
MUS 202	0 MUS 450	0
MUS 416	2 MUS 491, 492, or 493	1
MUS 421	2 Music elective	3
MUS 491, 492, or 493	1 General elective / CAP	3
Music elective	3 Social Science	3
MUS Theory or Composition	3	
General elective	3	
	<b>17</b>	<b>15</b>

Total credit hours: 137

**bachelor of music, music education-instrumental concentration****First Year**

<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
ASI 150	1 ENG 100 (CAP Humanities)	3
HST 103, PHL 103, or REL 103 (CAP Humanities)	3 HST 103, PHL 103, or REL 103 (CAP Humanities)	3
HST 103, PHL 103, or REL 103 (CAP Humanities)	3 MUS 112	2
MUS 111	2 MUS 114	2
MUS 113	2 MUS 195	1
MUS 200	0 MUS 200	0
MUS 202	0 MUS 202	0
MUS 399	2 MUS 241	0
MUS 337	1 MUS 337	1

MUS 492	1 MUS 390 (Chamber Ensemble)	0.5
MTH (CAP Mathematics)	3 MUS 399	2
	MUS 492	1
	EDT 110	2
	EDT 110L	1
	<b>18</b>	<b>18.5</b>

**Second Year**

Fall	Hours Spring	Hours
ENG 200	3 MUS 200	0
MUS 200	0 MUS 202	0
MUS 202	0 MUS 212	2
MUS 211	2 MUS 214	2
MUS 213	2 MUS 236	1
MUS 231	2 MUS 242	0
MUS 236	1 MUS 250	0
MUS 301 (CAP Adv Historical Studies)	3 MUS 302 (CAP Integrative)	3
MUS 336	1 MUS 336	1
MUS 339	1 MUS 339	1
MUS 390 (Chamber Ensemble)	0.5 MUS 390 (Chamber Ensemble)	0.5
MUS 399	2 MUS 399	2
MUS 492	1 MUS 492	1
	MUS 430	2
	EDT 207	3
	EDT 207L	0
	<b>18.5</b>	<b>18.5</b>

**Third Year**

Fall	Hours Spring	Hours
CMM 100	3 MUS 200	0
MUS 200	0 MUS 202	0
MUS 202	0 MUS 332	3
MUS 240	2 MUS 346	2
MUS 318	2 MUS 399	2
MUS 335	3 MUS 430	2
MUS 338	1 MUS 492	1
MUS 340	2 CAP Natural Science	3
MUS 390 (Choral Ensemble)	1 CAP Inquiry	3
MUS 399	2 Adv REL (CAP Faith Traditions)	3
EDT 305 (CAP Practical Ethical Action & Adv Philosophy)	3	
	<b>19</b>	<b>19</b>

**Fourth Year**

Fall	Hours Spring	Hours
MUS 200	0 EDT 479	12
MUS 202	0	
MUS 303 (CAP Arts & Diversity and Social Justice)	3	
MUS 331	3	

MUS 390 (Chamber Ensemble)	0.5
MUS 390 (Marching Band)	1
MUS 399	2
MUS 431	2
MUS 450	0
CAP Social Science	3
CAP Natural Science	4
	<b>18.5</b>

**12**

Total credit hours: 142

**bachelor of music, music education-vocal concentration****First Year**

Fall	Hours Spring	Hours
ASI 150	1 ENG 100 (CAP Humanities)	3
HST 103, PHL 103, or REL 103 (CAP Humanities)	3 HST 103, PHL 103, or REL 103 (CAP Humanities)	3
HST 103, PHL 103, or REL 103 (CAP Humanities)	3 MUS 112	2
MUS 111	2 MUS 114	2
MUS 113	2 MUS 200	0
MUS 200	0 MUS 202	0
MUS 202	0 MUS 235	1
MUS 399	2 MUS 241	0
MUS 195	1 MUS 295	1
MUS 493	1 MUS 399	2
MTH (CAP Mathematics)	3 MUS 493	1
	EDT 110	2
	EDT 110L	1
	<b>18</b>	<b>18</b>

**Second Year**

Fall	Hours Spring	Hours
ENG 200	3 MUS 200	0
MUS 200	0 MUS 202	0
MUS 202	0 MUS 212	2
MUS 211	2 MUS 214	2
MUS 213	2 MUS 242	0
MUS 231	2 MUS 250	0
MUS 237	1 MUS 302 (CAP Integrative)	3
MUS 301 (CAP Adv Historical Studies)	3 MUS 408	2
MUS 338	1 MUS 399 (elective)	2
MUS 390	1 MUS 399	2
MUS 399	2 MUS 493	1
MUS 493	1 EDT 207	3
MUS 399	1 EDT 207L	0
	<b>19</b>	<b>17</b>

**Third Year**

Fall	Hours Spring	Hours
CMM 100	3 MUS 200	0
MUS 200	0 MUS 202	0

MUS 202	0 MUS 332	3	MUS 213	2 MUS 212	2
MUS 240	2 MUS 339	1	MUS 240	2 MUS 214	2
MUS 318	2 MUS 345	2	MUS 241	0 MUS 242	0
MUS 335	3 MUS 233	1	MUS 399 or MUS 499	4 MUS 250	0
MUS 238	1 MUS 399	2	MUS 491, 492, or 493	1 MUS 318	2
MUS 340	2 MUS 390 (University Concert Band)	1	SSC 200 (CAP Social Science)	3 MUS 399 or MUS 499	4
MUS 399	2 CAP Natural Science	3		MUS 491, 492, or 493	1
EDT 305 (CAP Practical Ethical Action & Adv Philosophy)	3 CAP Inquiry	3		<b>18</b>	<b>17</b>
MUS 493	1 Adv REL (CAP Faith Traditions)	3			
<b>19</b>		<b>19</b>			
<b>Fourth Year</b>					
<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>	<b>Third Year</b>	<b>Hours Spring</b>	<b>Hours</b>
MUS 200	0 EDT 479	12	<b>Fall</b>	3 MUS 200	0
MUS 202	0		CAP Inquiry	0 MUS 202	0
MUS 303 (CAP Arts & Diversity and Social Justice)	3		MUS 202	0 MUS 302 (CAP Integrative)	3
MUS 331	3		MUS 301 (CAP Adv Historical Studies)	3 MUS 399 and/or MUS 499	6
MUS 390	1		MUS 399 and/or MUS 499	6 MUS 491, 492, or 493	1
MUS 390 (Ebony Heritage Singers)	1		Music elective	1 Music elective	2
MUS 408	2		MUS 491, 492, or 493	1 Music elective	1
MUS 450	0		General elective	3 Social Science	3
CAP Social Science	3			<b>17</b>	<b>16</b>
CAP Natural Science	4				
<b>17</b>		<b>12</b>	<b>Fourth Year</b>	<b>Hours Spring</b>	<b>Hours</b>
			<b>Fall</b>	3 Adv PHL (CAP Practical Ethical Action)	3
			Adv REL (CAP Faith Traditions)	0 MUS 399 or MUS 499	4
			MUS 200	0 MUS 450	0
			MUS 202	3 MUS 491, 492, or 493	1
			MUS 303 (CAP Arts & Diversity and Social Justice)	2 Music elective	2
			MUS 416	4 Music elective	2
			MUS 399 or MUS 499	0 Music elective	2
			MUS 450	1 General elective	1
			MUS 491, 492, or 493	2	
			Music elective	2	
			Music elective	<b>17</b>	<b>15</b>

Total credit hours: 139

## bachelor of music, music performance

### First Year

<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
ASI 150	1 ENG 100 (CAP Humanities)	3
HST 103, PHL 103, or REL 103 (CAP Humanities)	3 HST 103, PHL 103, or REL 103 (CAP Humanities)	3
HST 103, PHL 103, or REL 103 (CAP Humanities)	3 MTH (CAP Mathematics)	3
CMM 100	3 MUS 112	2
MUS 111	2 MUS 114	2
MUS 113	2 MUS 200	0
MUS 200	0 MUS 202	0
MUS 202	0 MUS 399 or MUS 499	4
MUS 399 or MUS 499	4 MUS 491, 492, or 493	1
MUS 491, 492, or 493	1	
<b>19</b>		<b>18</b>

### Second Year

<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
CAP Natural Science	4 ENG 200	3
MUS 200	0 CAP Natural Science	3
MUS 202	0 MUS 200	0
MUS 211	2 MUS 202	0

## bachelor of music, music therapy

### First Year

<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
ASI 150	1 ENG 100 (CAP Humanities)	3
HST 103, PHL 103, or REL 103 (CAP Humanities)	3 HST 103, PHL 103, or REL 103 (CAP Humanities)	3
HST 103, PHL 103, or REL 103 (CAP Humanities)	3 MUS 112	2
PSY 101	3 MUS 114	2
MUS 111	2 MUS 195	1
MUS 113	2 MUS 200	0
MUS 200	0 MUS 202	0
MUS 202	0 MUS 233	1
MUS 399	2 MUS 285	3
MUS 491, 492, or 493	1 MUS 399	2

MUS 491, 492, or 493	1
MUS 241	0
<b>17</b>	<b>18</b>

**Second Year**

<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
ENG 200	3 MTH 207 (CAP Mathematics)	3
CMM 100 (CAP Communication)	3 PSY 351	3
MUS 200	0 MUS 200	0
MUS 202	0 MUS 202	0
MUS 211	2 MUS 212	2
MUS 213	2 MUS 214	2
MUS 282	2 MUS 242	0
MUS 290	1 MUS 250	0
MUS 301 (CAP Adv Historical Studies)	3 MUS 287	1
MUS 399	2 MUS 295	1
MUS 491, 492, or 493	1 MUS 302 (CAP Integrative)	3
	MUS 338	1
	MUS 399	2
	MUS 491, 492, or 493	1
	<b>19</b>	<b>19</b>

**Third Year**

<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
MUS 200	0 MUS 200	0
MUS 202	0 MUS 202	0
MUS 237, 238, or 293	1 MUS 289	1
MUS 286	2 MUS 303 (CAP Arts & Diversity & Social Justice)	3
MUS 288	1 MUS 491, 492, or 493	1
MUS 381	2 MUS 486	2
MUS 399	2 MUS 450	0
MUS 491, 492, or 493	1 Music elective	2
PSY 363	3 HSS 305	3
CAP Natural Science	4 CAP Inquiry	3
	<b>16</b>	<b>15</b>

**Fourth Year**

<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
Adv REL (CAP Faith Traditions)	3 Adv PHL (CAP Practical Ethical Action)	3
MUS 200	0 MUS 382	2
MUS 202	0 MUS 386	3
MUS 240	2 MUS 388	2
MUS 318	2 Music electives	3
MUS 385	3 MUS 489 (taken after last full semester)	2
MUS 387	2	
PSY 355	3	
	<b>15</b>	<b>15</b>

Total credit hours: 134

**Courses****MUS 104. Music Literature for the Elementary Classroom. 2 Hours**

Study of music literature and its direct application to elementary classroom use.

**MUS 110. Fundamentals of Music. 2 Hours**

For the student with no previous experience with theory of music. Notation of music, key and time signatures, fundamental harmonic progression, and introduction to the piano keyboard. Elementary ear training and dictation. Open to all University students.

**MUS 111. Theory of Music I. 2 Hours**

Basic vocabulary and grammar of music: fundamentals (intervals, scales, modes, keys, triads), and counterpoint studies. Assignments are done with computer notation programs, and portions of the course use web-based texts.

**MUS 112. Theory of Music II. 2 Hours**

Basic diatonic and chromatic harmonic vocabulary studies, emphasizing both writing and analysis skills. Assignments are done with computer notation programs, and portions of the course use web-based texts. Prerequisite(s): (MUS 111 with a grade of C- or better) or permission of instructor.

**MUS 113. Aural Skills I. 2 Hours**

The hearing of musical structure is developed through active listening to representative pieces from music literature. Emphasis on formal relations, musical development and historical styles. Introduction to solfege singing and music transcription.

**MUS 114. Aural Skills II. 2 Hours**

Further developing the ability to hear musical structure through transcription of intervals, melody, rhythm and harmonic patterns and short musical compositions of music in representative stylistic categories. Use of solfege singing to represent students' internalization of melodic structure. Prerequisite(s): (MUS 113 with a grade of C- or better) or permission of instructor.

**MUS 115. Music in Theory & Practice. 3 Hours**

Music theory studies in an historical context, appropriate for non-music majors. Fundamentals of music vocabulary and music prior to 1600: origins of melody and counterpoint. Aural skills incorporated into daily classes. Open to all University students. Prerequisite(s): At least one year of instrument/voice studies which required note-reading ability. Corequisite(s): Current performance studies or active participation in a music ensemble which requires note-reading skills.

**MUS 115H. Music in Theory & Practice. 3 Hours**

Music theory studies in an historical context, appropriate for non-music majors. Fundamentals of music vocabulary and music prior to 1600: origins of melody and counterpoint. Aural skills incorporated into daily classes. Open to all University students. Prerequisite(s): At least one year of instrument/voice studies which required note-reading ability. Corequisite(s): Current performance studies or active participation in a music ensemble which requires note-reading skills.

**MUS 116. Music in Theory & Practice. 3 Hours**

Continuation of MUS 115: music between 1600-1900, harmony and analysis. Aural skills incorporated into daily classes. Prerequisite(s): MUS 115. Corequisite(s): Current performance studies or active participation in a music ensemble which requires note-reading skills.



**MUS 121. Composition I. 1 Hour**

Supplemental explorations for majors in music composition, to accompany work in MUS 111-112. Basic notational practices and application of traditional techniques to the creative process. Prerequisite(s): MUS 111 (may be taken as a corequisite).

**MUS 122. Composition I. 1 Hour**

Supplemental explorations for majors in music composition, to accompany work in MUS 111-112. Basic notational practices and application of traditional techniques to the creative process. Prerequisite(s): MUS 112 (may be taken as a corequisite). Corequisite(s): MUS 121.

**MUS 191. Voice Class. 2 Hours**

Basic principles of good singing; development of the voice; vocal literature. Open to all students, especially non-music majors.

**MUS 195. Beginning Guitar Class I. 1 Hour**

Introduction to playing the guitar with emphasis on chord playing and accompaniment, improvisation, and application of the guitar to music teaching.

**MUS 196. Group Piano I. 1 Hour**

For the student with no previous piano study. Rudiments of music reading, performance of simple folk and popular music, basic knowledge of scales, key signatures, and chords. Open to all University students.

**MUS 200. Recital Attendance. 0 Hours**

All music majors are required to attend professional and student concerts and recitals, to develop critical listening experience and knowledge of repertoire.

**MUS 201. Music In Concert. 3 Hours**

Survey of music literature, styles, and important composers, through preparation for and attendance at selected concerts on the campus and in the community. Concert ticket fees will be required. Open to all University students.

**MUS 201H. Music In Concert. 3 Hours**

Survey of music literature, styles, and important composers, through preparation for and attendance at selected concerts on the campus and in the community. Concert ticket fees will be required. Open to all University students.

**MUS 202. Professional Development Workshop. 0 Hours**

All Bachelor of Music majors are required to attend a weekly professional workshop in their degree area. Course format is didactic and/or experiential according to degree program needs. Course material includes a variety of professional, pedagogical, and technological topics. May be repeated.

**MUS 203. Sights & Sounds of Music. 3 Hours**

An introduction to music and its literature, with emphasis on the way music has been shaped by its cultural, geographic, and historical contexts. Open to all University students.

**MUS 203H. Sights & Sounds of Music. 3 Hours**

An introduction to music and its literature, with emphasis on the way music has been shaped by its cultural, geographic, and historical contexts. Open to all University students.

**MUS 205. Music, Technology and Culture. 3 Hours**

Through interactive and creative activities, students will explore the intersections of music technology and culture historically and in our current rapidly changing media and musical communities at UD and beyond. The course will also consider the ways technology has altered our approach and access to music making and listening.

**MUS 211. Theory of Music III. 2 Hours**

Advanced diatonic and chromatic harmonic vocabulary studies and Schenkerian analysis, emphasizing both writing and analysis skills. Assignments are done with computer notation programs, and portions of the course use web-based texts. Prerequisite(s): (MUS 112 with grade of C- or better) or permission of instructor.

**MUS 212. Theory of Music IV. 2 Hours**

Music of the twentieth century, emphasizing both writing and analysis skills. Assignments are done with computer notation programs, and portions of the course use web-based texts. Prerequisite(s): (MUS 211 with a grade of C- or better) or permission of instructor.

**MUS 213. Aural Skills III. 2 Hours**

Explores more advanced musical hearing and transcription techniques through later harmonic, melodic and rhythmic styles. More advanced melodic, harmonic and rhythmic materials as well as the continuing use of solfege singing to represent students' internalization of melodic structure. Prerequisite(s): (MUS 114 with grade of C- or better) or permission of instructor.

**MUS 214. Aural Skills IV. 2 Hours**

Late nineteenth, twentieth and twenty-first century musical structures of harmony, melody, rhythm and compositional development/form explored through listening, transcription and performance. Prerequisite(s): (MUS 213 with a grade of C- or better) or permission of instructor.

**MUS 217. Listening & Transcription Skills. 2 Hours**

Skills in hearing and notating music of representative and diverse styles through use of digital recording, sequencing, and computer notation software. Prerequisite(s): (MUS 112, 114) or permission of instructor.

**MUS 218. Popular Jazz Theory. 2 Hours**

Skills in the composition and arranging of popular and jazz styles in music including harmonic progression, melodic forms and the structure of voices and instruments in arrangements. Emphasis on creative applications of technology on the facility of music production. Culminating project is an arrangement, produced and recorded by the student. Prerequisite(s): (MUS 111, 112) or (MUS 115, 116) or permission of instructor.

**MUS 221. Composition II. 1 Hour**

Supplemental explorations for majors in music composition, to accompany work in MUS 211-212. Style analysis and synthesis, extension of traditional techniques, and basic instrumental applications. Prerequisite(s): MUS 211 (may be taken as a corequisite).

**MUS 222. Composition II. 1 Hour**

Supplemental explorations for majors in music composition, to accompany work in MUS 211-212. Style analysis and synthesis, extension of traditional techniques, and basic instrumental applications. Prerequisite(s): MUS 212, 221, (may be taken as corequisites).

**MUS 223. Introduction to Music Technology. 2 Hours**

Provides students with an introduction to the notation and recording of music with a computer. Students will learn to compile and print music, record digital instruments with MIDI, and record and mix music with portable digital audio workstations. Prerequisite(s): (MUS 111, 112) or (MUS 115, 116) or permission of instructor.

**MUS 231. Introduction to Music Education. 2 Hours**

An introduction to a wide variety of pedagogical and philosophical aspects of teaching the arts. Topics will include technology, national and state standards, history, and professional organizations. Prerequisite(s): EDT 110.

**MUS 232. Integrating the Arts. 2 Hours**

Primarily for Teacher Education majors. Development of knowledge, skills, values, and attitudes in music for integration into a classroom setting in which other classroom subjects are taught. Prerequisite(s): EDT 110.

**MUS 233. Eurhythmics. 1 Hour**

Exploration of time, space, and energy through individual and collaborative structured and creative movement for musicianship skill development.

**MUS 235. Voice Pedagogy. 1 Hour**

Techniques for teaching singing. Prerequisite(s): Voice major or permission of instructor.

**MUS 236. Voice Laboratory. 1 Hour**

Introduction to the performance and pedagogical techniques for voice. Prerequisite(s): Instrumental music major or permission of department chairperson.

**MUS 237. Brass Instrument Laboratory. 1 Hour**

Introduction to the performance and pedagogical techniques for the brass instrument family.

**MUS 238. Woodwind Instrument Laboratory. 1 Hour**

Introduction to the performance and pedagogical techniques for the woodwind instrument family.

**MUS 240. Fundamentals of Conducting. 2 Hours**

Introductory-level course discussing basic conducting techniques, musical styles, interpretation, score study and analysis, transposition, and literature. Dual emphasis of choral and instrumental techniques.

**MUS 241. Keyboard Competency I. 0 Hours**

Successful mastery of keyboard competency skills required for the first year music major. Prerequisite(s): Permission of department chairperson.

**MUS 242. Keyboard Competency II. 0 Hours**

Successful mastery of keyboard competency skills required for the second year music major. Prerequisite(s): MUS 241; permission of department chairperson.

**MUS 250. Second Year Review. 0 Hours**

Required mid-point evaluation of all music majors typically completed in the second semester of the second year of study toward the degree. Students must earn a satisfactory grade (S) in this course in order to enroll in upper-level coursework in their respective degree programs. Prerequisite(s): Permission of department chairperson.

**MUS 280. Music & Movement for Persons with Disabilities. 1 Hour**

Training in the use of music and movement for children with disabilities under the supervision of AIM (Adventures in Movement) for the Handicapped, Inc. Includes observations and practices in the field.

**MUS 282. Functional Music Therapy Skills. 2 Hours**

Aids music therapy majors in the development of functional competencies on keyboard, guitar, and voice, as well as the ability to learn, memorize, and perform a broad repertoire of American popular song. Prerequisite(s): MUS 195, MUS 241.

**MUS 285. Introduction to Music Therapy. 3 Hours**

History and development of music therapy profession; survey of theoretical bases, current trends, and music therapy applications with varied clientele. Prerequisite(s): PSY 101.

**MUS 286. Music Therapy Methods. 2 Hours**

Introduction to four methods of music therapy: re-creative, receptive, composition, and improvisation. Emphasis on assessment, planning, facilitation, and evaluation of music therapy experiences within each method. Prerequisite(s): MUS 285.

**MUS 287. Practicum in Music Therapy I. 1 Hour**

Supervised pre-internship field experiences with children and/or adults with special needs. One-hour weekly lab required. Prerequisite(s): MUS 282; permission of department chairperson.

**MUS 288. Practicum in Music Therapy II. 1 Hour**

Supervised pre-internship field experiences with children and/or adults with special needs. One-hour weekly lab required. Prerequisite(s): MUS 250, 287.

**MUS 289. Practicum in Music Therapy III. 1 Hour**

Supervised pre-internship field experiences with children and/or adults with special needs. One-hour weekly lab required. Prerequisite(s): MUS 288.

**MUS 290. Music Therapy Treatment Processes. 1 Hour**

Addresses the development of established competencies in the areas of music therapy referral, assessment, treatment planning, evaluation, supervision, and documentation of these processes. Prerequisite(s): MUS 285.

**MUS 293. Organ Class. 1 Hour**

Introduction to the organ, including basic performance techniques, registration, beginning literature, and hymn playing.

**MUS 294. Harpsichord Class. 1 Hour**

Beginning course in harpsichord performance, including basic technique, stylistic considerations, and simple maintenance and tuning of the instrument.

**MUS 295. Beginning Guitar Class II. 1 Hour**

Note reading in first position; advanced chord work, introduction to chord solo playing, and improvisation. Prerequisite(s): MUS 195 or equivalent.

**MUS 296. Functional Keyboard Skills I. 1 Hour**

Instruction in development of basic performance technique, sight reading, accompanying, transposing, playing by ear, improvising, and score reading.

**MUS 297. Functional Keyboard Skills II. 1 Hour**

Further development of techniques introduced in MUS 296. Prerequisite(s): MUS 296.

**MUS 298. Functional Keyboard Skills III. 1 Hour**

Continuation of MUS 297 with emphasis on improvisation and harmonization techniques.

**MUS 299. Functional Keyboard Skills IV. 1 Hour**

Continuation of MUS 298 with emphasis on advanced chord work and modulation techniques. Prerequisite(s): MUS 298.

**MUS 301. Music History & Literature I. 3 Hours**

Survey of Western music history and literature from the Middle Ages to the present. Important composers, masterworks of music literature, compositional styles.

**MUS 302. Music History & Literature II. 3 Hours**

Survey of Western music history and literature from the Middle Ages to the present. Important composers, masterworks of music literature, compositional styles.

**MUS 302H. Music History & Literature II. 3 Hours****MUS 303. Introduction to Musics of the World. 3 Hours**

Survey of music from around the world, and its role and function in society.

**MUS 304. History of American Music. 3 Hours**

Survey of the American musical heritage emphasizing Anglo- and Afro-American folk traditions, early religious music, country music, pioneers in piano, band and concert music, and contemporary popular music. Open to all University students.

**MUS 304H. History of American Music. 3 Hours**

Survey of the American musical heritage emphasizing Anglo- and Afro-American folk traditions, early religious music, country music, pioneers in piano, band and concert music, and contemporary popular music. Open to all University students.

**MUS 305. African-American Sacred Music. 3 Hours**

Historical survey of African-American sacred music from its African roots to the present with an emphasis on developments in recent decades. Examines spirituals, the ring-shout, civil rights songs, the various forms of Gospel music, traditional hymnody of the African-American church, and the musical aspects of black preaching. Open to all University students.

**MUS 305H. African-American Sacred Music. 3 Hours**

Historical survey of African-American sacred music from its African roots to the present with an emphasis on developments in recent decades. Examines spirituals, the ring-shout, civil rights songs, the various forms of Gospel music, traditional hymnody of the African-American church, and the musical aspects of black preaching. Open to all University students.

**MUS 306. History of American Jazz. 3 Hours**

Survey of the literature and performance practices from 1890 to the present. Includes blues, Dixieland, ragtime, boogie-woogie, swing, bop, cool, funky, and current techniques. Open to all University students.

**MUS 307. Development of American Popular Song. 3 Hours**

Survey of American popular music from the days of the colonies, the war years, the ballad opera, minstrel, vaudeville, operetta, early film music, through Tin Pan Alley to Broadway, including European influences. Open to all University students.

**MUS 308. Chamber Music & Symphony. 2 Hours**

Formal and harmonic analysis of chamber music. Formal analysis of symphonies of classic, romantic, and contemporary composers. Prerequisite(s): MUS 211, MUS 212.

**MUS 309. Opera History & Literature. 3 Hours**

Survey of the development of the opera and its literature from its seventeenth-century beginnings to the present. Focus upon major works and composers. Open to all University students.

**MUS 309H. Operal History & Literature. 3 Hours****MUS 310. Mozart's Operas. 3 Hours**

An interdisciplinary survey of Mozart's operas - German and Italian, serious and comic. Class discussions will be supplemented by extensive listening and/or viewing of recorded performances and, when possible, attendance at live performances.

**MUS 311. Eighteenth-Century Counterpoint. 2 Hours**

Study of the contrapuntal technique of the eighteenth century, particularly in the instrumental works of J.S. Bach. Original compositions in forms of the invention and the fugue. Prerequisite(s): MUS 211, MUS 212.

**MUS 312. Sixteenth-Century Counterpoint. 2 Hours**

Study of the medieval modes and the vocal polyphony of the motet and the Mass, up to and including five-part writing; original student compositions.

**MUS 313. Advanced Aural Skills. 2 Hours**

Advanced training in dictation, solfege, and aural analysis. Prerequisite(s): MUS 215.

**MUS 314. Score Reading. 2 Hours**

Training in reading music at the piano from open score. Drill in transposition, improvisation, and reading of various clefs, leading to the realization of full vocal and orchestral scores.

**MUS 315. Music and Gender. 3 Hours**

Survey of issues concerning music, gender and sexuality across cultures and time periods. Open to all University students.

**MUS 316. Fundamentals of Orchestration. 2 Hours**

Instrumentation studies of the four main orchestral families: woodwinds, brass, percussion, strings. Some work in combining families. Prerequisite(s): MUS 212.

**MUS 318. Fundamentals of Arranging. 2 Hours**

Arranging studies for woodwinds, brass, percussion, strings, and choir. Individual examination of instruments; projects. Prerequisite(s): MUS 212.

**MUS 321. Composition III. 2 Hours**

Explorations of original composition, which utilize equally the concepts of pitch, temporal elements, timbres, and dynamics. Prerequisite(s): MUS 214, 250.

**MUS 322. Composition III. 2 Hours**

Explorations of original composition, which utilize equally the concepts of pitch, temporal elements, timbres, and dynamics. Prerequisite(s): MUS 250, 321.

**MUS 323. Recording Arts & Digital Media. 3 Hours**

Comprehensive overview of digital audio and digital visual media. Skills in recording, archiving, and presenting work. Prerequisite(s): MUS 223 or permission of instructor.

**MUS 325. Beethoven & His Era. 3 Hours**

Survey of the music of Ludwig van Beethoven, including orchestral works and chamber music, opera, keyboard and sacred music; and a survey of the historical context in which Beethoven lived and worked - Europe and the Habsburg Empire of the late eighteenth and early nineteenth centuries, and especially Vienna, the Habsburg capital. Beethoven is the culmination of the High Classic style and also the first of a new generation of Romantic composers.

**MUS 327. Music in Film. 3 Hours**

Survey of the styles, aesthetics, and techniques of film music, emphasizing the interaction of music and visual image in film. Consideration of the changes in the evolution of both film and film music, and their relationship to culture and society.

**MUS 327H. Music in Film. 3 Hours**

Survey of the styles, aesthetics, and techniques of film music, emphasizing the interaction of music and visual image in film. Consideration of the changes in the evolution of both film and film music, and their relationship to culture and society.

**MUS 328. History of the American Musical. 3 Hours**

Survey of the history and literature of the American musical from its nineteenth century predecessors to the present day. The course will focus on major representative works, major composers, and other artistic innovators. Open to all University students.

**MUS 331. Choral Music Methods. 3 Hours**

Pedagogical techniques for choral ensembles. Topics include the singing voice, the changing voice, organization, artistic development, literature, and rehearsal techniques. National standards are emphasized as they relate to specific objectives. Current related practices in technology are incorporated in specific assignments. Field experience required. Prerequisite(s): MUS 250.

**MUS 331H. Choral Music Methods. 3 Hours**

Pedagogical techniques for choral ensembles. Topics include the singing voice, the changing voice, organization, artistic development, literature, and rehearsal techniques. National standards are emphasized as they relate to specific objectives. Current related practices in technology are incorporated in specific assignments. Field experience required. Prerequisite(s): MUS 250.

**MUS 332. Instrumental Music Methods. 3 Hours**

Pedagogical techniques for band and orchestra. Topics include teaching and rehearsal techniques, organization, assessment, learning theories, philosophy, literature, and programming. National standards are emphasized as they relate to specific objectives. Current related practices in technology are incorporated in specific assignments. Field experience required. Prerequisite(s): MUS 250.

**MUS 332H. Instrumental Music Methods. 3 Hours**

Pedagogical techniques for band and orchestra. Topics include teaching and rehearsal techniques, organization, assessment, learning theories, philosophy, literature, and programming. National standards are emphasized as they relate to specific objectives. Current related practices in technology are incorporated in specific assignments. Field experience required. Prerequisite(s): MUS 250.

**MUS 335. Classroom Music Methods. 3 Hours**

Pedagogical techniques for classroom music in grades preK through 8. Topics include the pedagogical methods of Orff, Kodaly, Suzuki, and Dalcroze; lesson-plan design, implementation, and assessment. Special emphasis on the exceptional learner. National Standards are emphasized as they relate to specific objectives. Current related practices in technology are incorporated in specific assignments. Field experience required. Prerequisite(s): MUS 250.

**MUS 336. Woodwind Pedagogy. 1 Hour**

Course in woodwind pedagogy offered in two semester-long sections: (1) pedagogical techniques for clarinet and flute; (2) pedagogical techniques for saxophone, oboe, and bassoon. Repeatable up to two semester hours.

**MUS 337. Brass Pedagogy. 1 Hour**

Course in brass pedagogy offered in two semester-long sections (1) pedagogical techniques for trumpet and horn; (2) pedagogical techniques for trombone, euphonium, and tuba. Repeatable up to two semester hours.

**MUS 338. Percussion Pedagogy. 0.5-1 Hours**

Course in percussion pedagogy offered in two semester-long sections: (1) Pedagogical techniques for the percussion instruments; (2) performance study on snare drum, mallets and timpani; teaching techniques for accessory instruments; minor repairs: method book analysis. Repeatable up to one and a half semester hours.

**MUS 339. String Pedagogy. 1 Hour**

Pedagogical techniques for the string instruments. Separate sections for upper strings and lower strings. Each section is a full-term course.

**MUS 340. Music Education for Students with Special Needs. 2 Hours**

Introduction to issues affecting music education with students who have physical, cognitive, emotional, and sensory challenges that affect the learning process. Specific musical characteristics and needs of special learners will be presented along with methods and strategies for teaching. Information and guidelines regarding regulatory issues related to music education will be addressed. Field experience required. Prerequisite(s): MUS 231.

**MUS 345. Choral Conducting. 2 Hours**

Continuation of techniques introduced in MUS 240, dealing specifically with techniques for choral ensembles. Prerequisite(s): MUS 240.

**MUS 346. Instrumental Conducting. 2 Hours**

Continuation of techniques introduced in MUS 240, dealing specifically with techniques for band and orchestra. Prerequisite(s): MUS 240.

**MUS 350. Sacred Music History. 3 Hours**

Survey of the development of Christian Music and its function in worship. The focus will be on historical styles, including both their impact on and their application within liturgical settings, as well as on the religious reflections engendered by specific works.

**MUS 350H. Sacred Music History. 3 Hours**

Survey of the development of Christian Music and its function in worship. The focus will be on historical styles, including both their impact on and their application within liturgical settings, as well as on the religious reflections engendered by specific works.

**MUS 351. Church Music Administration. 2 Hours**

Examination of the process, organization, administration, planning, and presentation of church music in various Christian traditions. Attention is given to concepts of worship planning, the organization of a comprehensive music program, program development and the relationship between the music ministry and various other church entities.

**MUS 352. Understanding Sacred Music & Worship in the Local Church. 3 Hours**

Focus on the important relationship between music and worship in the life of the church with an emphasis on major contemporary trends in sacred music and work. An historical overview of music and worship with biblical foundations for both are provided. Prerequisite(s): REL 103; (ASI 111, 112).

**MUS 352H. Understanding Sacred Music & Worship in the Local Church. 3 Hours****MUS 360. Special Topics in Music. 1-3 Hours**

Studies in specialized areas of music. May be repeated as topics change, up to six semester hours. Prerequisite(s): Permission of instructor.

**MUS 360H. Special Topics in Music. 1-3 Hours**

Studies in specialized areas of music. May be repeated as topics change, up to six semester hours. Prerequisite(s): Permission of instructor.

**MUS 365. Music In Society. 3 Hours**

Study of how music and musicians affect, and are affected by, the human societies in which they live.

**MUS 381. Clinical & Educational Music Improvisation I. 2 Hours**

Music improvisation techniques and procedures using piano, percussion, voice, guitar, and student's major instrument. Emphasis on the acquisition of clinical and educational music improvisational skills to be applied in the medical, rehabilitation, clinical and/or school music education setting. Prerequisite(s): MUS 212, 214.

**MUS 382. Clinical & Educational Music Improvisation II. 2 Hours**

Intermediate skill development in clinical and educational music improvisation. Emphasis on assessment, implementation, and evaluation of individual, dyadic, and group improvisatory experiences. Acquisition of expressive movement repertoire to improvised music. Prerequisite(s): MUS 381.

**MUS 385. Music Therapy Principles. 3 Hours**

Principles and processes underlying the applications of music in therapy, including philosophical approaches, assessment procedures, goals and objectives, evaluation and documentation techniques, and professional ethics and standards of clinical practice. Prerequisite(s): MUS 289.



**MUS 386. Music & Psychotherapy. 3 Hours**

Overview of concepts, methods, and materials in the clinical practice of various forms of music psychotherapy. Exploration of the role and function of music within other therapeutic approaches (e.g., cognitive, humanistic, etc.). Identification of factors and issues affecting the helping process.

**MUS 387. Practicum in Music Therapy IV. 2 Hours**

Supervised pre-internship experiences with children and/or adults with special needs. One-hour weekly lab required. Corequisite(s): MUS 385.

**MUS 388. Practicum in Music Therapy V. 2 Hours**

Supervised pre-internship experiences with children and/or adults with special needs. One-hour weekly lab required. Corequisite(s): MUS 386.

**MUS 390. Ensembles. 0-1 Hours**

Various ensembles offered by the Department of Music. See overview page for ensemble titles. Prerequisite(s): Permission of instructor.

**MUS 391. Jazz Improvisation I. 1 Hour**

Study and performance of the musical elements that define the various styles of jazz improvisation from the beginning to the intermediate level. Prerequisite(s): MUS 114 or permission of department chairperson.

**MUS 392. Jazz Improvisation II. 1 Hour**

Study of the musical elements that define the various styles of jazz improvisation from the intermediate to the advanced level. Prerequisite(s): MUS 391 or permission of department chairperson.

**MUS 396. Jazz Keyboard Harmony I. 1 Hour**

Practical and theoretical course of study achieved through in-depth analyses at an introductory level of chords and chord voicings, repertoire, manuscripts, videos and recordings of great jazz pianists. Students identify and perform harmonic techniques of jazz piano used by twentieth century jazz pianists. Prerequisite(s): MUS 297 or permission of department chairperson.

**MUS 397. Jazz Keyboard Harmony II. 1 Hour**

Practical and theoretical course of study achieved through in-depth analyses at an intermediate level of chords and chord voicings, repertoire, manuscripts, videos and recordings of great jazz pianists. Students identify and perform harmonic techniques of jazz piano used by twentieth century jazz pianists. Prerequisite(s): MUS 396 or permission of department chairperson.

**MUS 398. Instrumental Jazz Improvisation. 1 Hour**

Individualized instruction in instrumental jazz improvisation. Study of jazz theory, aural development, stylistic considerations, and repertoire. Prerequisite(s): Participation in Jazz Ensemble and/or Jazz Combo.

**MUS 399. Performance Studies. 1-2 Hours**

Private instruction (one thirty to forty-five minute lesson each week) in piano, voice, organ, violin, viola, cello, bass, flute, oboe, clarinet, bassoon, saxophone, trumpet-cornet, French horn, trombone, baritone, tuba, percussion, harp, harpsichord, classical and pick-style guitar, and jazz lessons in piano, guitar, bass, drums, brass, and woodwinds. Prerequisite(s): Permission of instructor.

**MUS 401. Medieval & Renaissance Music. 1 Hour**

The development of music from circa 400 to 1600, including plainchant, early polyphony, Ars Nova, and Renaissance music; the relationship of music to other arts and to its historical context. Open to all University students.

**MUS 402. Baroque Music. 2 Hours**

Literature and performing practices from 1600 to 1750; the relationship of music to social and cultural movements. Open to all University students.

**MUS 403. Classic & Romantic Music. 3 Hours**

Literature and performing practices from 1750 to 1900; the relationship of music to social and cultural movements. Open to all University students.

**MUS 404. Twentieth-Century Music. 2 Hours**

Study of twentieth-century music, its styles, and its cultural contexts, including post-romantic, impressionistic, neo-classic, and avant-garde. Open to all University students.

**MUS 405. Piano Literature. 2 Hours**

Comprehensive survey of literature for the piano. Required of piano performance majors.

**MUS 405H. Piano Literature. 2 Hours**

Comprehensive survey of literature for the piano. Required of piano performance majors.

**MUS 408. Diction & Literature for Singers. 2 Hours**

Course in foreign language diction with an associated survey of significant and representative works from the vocal solo repertoire. Course alternates its content: German and English; and French and Italian. Course may be repeated as content changes. Prerequisite(s): MUS 399 or 499.

**MUS 413. Style & Design. 2 Hours**

Exploration of appropriate analytical techniques as applied to Western music from the Renaissance to the present. Prerequisite(s): MUS 212.

**MUS 414. Style & Design. 2 Hours**

Exploration and application of various musical styles as demonstrated by original compositions patterned after selected historic models. Prerequisite(s): MUS 413.

**MUS 416. Advanced Orchestration. 2 Hours**

Continuation of MUS 316. Intensive instrumentation studies and detailed analysis of orchestral work. Prerequisite(s): MUS 316.

**MUS 418. Research in Music Theory. 2 Hours**

Practical experience in analysis for music composition majors. Prerequisite(s): Senior standing in music.

**MUS 419. Research in Music Theory. 2 Hours**

Practical experience in analysis for music composition majors. Prerequisite(s): Senior standing in music.

**MUS 421. Composition IV. 2 Hours**

Advanced work in musical composition, writing multi-movement forms of both vocal and instrumental music. Prerequisite(s): MUS 250, 321, 322.

**MUS 422. Composition IV. 2 Hours**

Advanced work in musical composition, writing multi-movement forms of both vocal and instrumental music. Prerequisite(s): MUS 250, 321, 322.

**MUS 423. Composition for Large Ensembles. 2 Hours**

Preparation and execution of an extended work for large instrumental or vocal ensemble. All aspects of score and part preparation, notation, orchestration, correction, rehearsal, and performance will be considered.

**MUS 424. Advanced Notational Techniques. 2 Hours**

Study of special problems in contemporary notation and calligraphy. Work will be done through analysis of twentieth-century techniques and creative solutions to individual problems.

**MUS 425. Electronic Music Composition. 2 Hours**

Study of musical electronic techniques, ranging from tape recorders and musique concrete through synthesizer and computer-generated and organized sound.

**MUS 426. Improvisational Music Composition. 2 Hours**

Discussion, study, and performance of improvisational musical techniques, including historical overview of classical extemporization, stream of consciousness, jazz, and aleatory and indeterminism.

**MUS 430. Jazz Pedagogy. 2 Hours**

Methods and materials for the organization and teaching of jazz performance classes. Topics include teaching improvisation, the rhythm section, and repertoire for the school jazz band. Field experience required. Corequisite(s): Participation in the jazz program.

**MUS 431. Marching Band Pedagogy. 2 Hours**

Methods and materials for the organization and teaching of the high school marching band. Topics include teaching and rehearsal techniques, drill design, and philosophy. Field experience required. Corequisite(s): Participation in the marching band.

**MUS 435. Piano Pedagogy. 2 Hours**

Systematic preparation for the development of piano technique and tone; survey and study of graded teaching material of grades I and II. Prerequisite(s): Four terms of piano study or equivalent.

**MUS 440. Advanced Instrumental Conducting. 2 Hours**

Individualized instruction dealing with advanced analysis, interpretation, aural skills, repertoire study, and conducting. Prerequisite(s): MUS 346.

**MUS 450. Degree Recital. 0 Hours**

Required performance for all students pursuing MUC, MUE, MUP, and MUT majors. In order to successfully complete the degree program, students must earn a satisfactory grade ("S") in this course. Prerequisite(s): MUS 250; permission of department chairperson.

**MUS 452. Contemporary Liturgical Music Repertoire. 2 Hours**

Examination of ways in which contemporary musical resources are utilized in the worship of Christian churches. Choral, congregational, cantoral, and instrumental material will be considered in the context of both the liturgical seasons and specific services. REL 446 recommended.

**MUS 459. Church Music Internship. 2 Hours**

Minimum of one semester's supervised service as organist and/or choral director in an approved parish setting. Prerequisite(s): Completion of half of certificate requirements; permission of department chairperson.

**MUS 460. Special Studies in Music. 1-9 Hours**

Studies in specialized areas of music, including music therapy and music education. May be repeated as topics change, up to nine semester hours. Prerequisite(s): Senior standing in music or permission of instructor.

**MUS 461. Special Topics in Church Music. 1-8 Hours**

Studies in specialized areas of music, including music therapy and music education. May be repeated as topics change, up to eight semester hours. Prerequisite(s): Senior standing in music or permission of instructor.

**MUS 461H. Special Topics in Church Music. 1-3 Hours**

Studies in specialized areas of music, including music therapy and music education. May be repeated as topics change, up to eight semester hours. Prerequisite(s): Senior standing in music or permission of instructor.

**MUS 477H. Honors Thesis. 3 Hours**

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

**MUS 478H. Honors Thesis. 3 Hours**

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

**MUS 480. Capstone Project Seminar. 1 Hour**

The first in a sequence of two capstone courses. To be taken in the first semester of the senior year. This course is required for all Bachelor of Arts with a major in Music degrees. Students select a faculty mentor and work with the mentor to establish a capstone project topic, goals, outcomes, and timeline associated with the project. Prerequisite(s): MUS 250; senior standing; MUS major or permission of department chairperson.

**MUS 480H. Capstone Project Seminar. 1 Hour**

The first in a sequence of two capstone courses. To be taken in the first semester of the senior year. This course is required for all Bachelor of Arts with a major in Music degrees. Students select a faculty mentor and work with the mentor to establish a capstone project topic, goals, outcomes, and timeline associated with the project. Prerequisite(s): MUS 250; senior standing; MUS major or permission of department chairperson.

**MUS 481. Capstone Project & Presentation. 1 Hour**

The second of two capstone courses leading to graduation. To be taken in the second semester of the senior year. Students implement, complete, present, and evaluate a project within their area of concentration, reviewed by faculty and peers. Faculty approval of project and presentation is required for graduation. Prerequisite(s): MUS 480 or permission of department chairperson.

**MUS 486. Research in Music Therapy. 2 Hours**

Introduction to research methods; review of literature on experimental studies. Research project.

**MUS 489. Music Therapy Internship. 2 Hours**

Minimum of 900 hours supervised clinical training through resident internship in an AMTA roster or university-affiliate internship. This requirement precedes the granting of the music therapy degree. Prerequisite(s): Senior standing in music therapy; permission.

**MUS 491. University Orchestra. 1 Hour**

Performing ensemble of string, wind, brass, and percussion players; preparing literature for orchestra and chamber orchestra. Open to all University community members by audition.

**MUS 492. Symphonic Wind Ensemble. 1 Hour**

Select band that performs the finest in wind literature. Presents regular concerts during fall and winter terms. Auditions required.

**MUS 493. University Chorale. 1 Hour**

Mixed vocal ensemble performing music from all style periods in regular concert appearances. Open to all University students. Auditions required.

**MUS 494. Dayton Jazz Ensemble. 1 Hour**

Ensemble specializes in the interpretation and performance of traditional and contemporary big band jazz, including the art of improvisation.

Audition required.

**MUS 499. Performance Studies. 4 Hours**

Private instruction (one-hour lessons weekly) in the same subjects as MUS 399. Prerequisite(s): Permission of instructor.

**MUS 499H. Performance. 4 Hours**

Private instruction (one-hour lessons weekly) in the same subjects as MUS 399. Prerequisite(s): Permission of instructor.

## Philosophy

Major

- Bachelor of Arts, Philosophy (p. 236)

Minor:

- Philosophy (p. 237)

The objective of the philosophy major program is to provide students with the opportunity to understand contemporary philosophy in view of the history of philosophy. Students majoring in philosophy must successfully complete a minimum of 37 semester hours. The philosophy major program is also offered in India in conjunction with the Marianists. Consult the chairperson of the department for further information.

A minor in philosophy consists of 18 semester hours.

### Faculty

John Inglis, Chairperson

Distinguished Service Professor: Johnson

Professors Emeriti: Johnson, Kunkel, Quinn, Richards, Ulrich, Zembaty

Professors: Benson, DesAutels, Fischer, Fouke, Inglis, Kebede, Poe, Tibbetts

Associate Professors: Gabbe, Mosser, Paslaru, Payne, Whisnant

Assistant Professors: Cheung, James, Velasquez

Lecturers: Bresnahan, Dunham, Florek, Marvin

## Bachelor of Arts with a major in Philosophy (phl) Minimum 124 Hours

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>		12
HST 103	West and the World	
REL 103	Introduction to Religious and Theological Studies	
PHL 103	Intro To Philosophy	
ENG 100	Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>		0-3
ENG 200	Writing Seminar II	
Oral Communication		3
CMM 100	Principles of Oral Communication	
Mathematics		3
Social Science		3
Arts		3

Natural Sciences <sup>4</sup>	7
Crossing Boundaries	variable credit
Faith Traditions	
Practical Ethical Action	
Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

### Liberal Studies Curriculum

Creative and Performing Arts (May include CAP Arts)	3
L2 Proficiency (Proficiency in a language other than English)	0-11
Literature (May include CAP Components)	3
Mathematics, excluding MTH 205 (Satisfies CAP Mathematics)	3
Natural Sciences (Satisfies CAP Natural Science)	11
Social Sciences (Includes CAP Social Science)	12

### Major Requirements <sup>1, 2</sup>

PHL 103	Intro To Philosophy	3-7
or ASI 120	The Development of Western Culture in a Global Context	
PHL 240	Research Methodologies & Technologies	1
PHL 301	Practical Logic <sup>3</sup>	3
or PHL 302	Symbolic Logic	
PHL 350	Classical Greek Philosophy	3
PHL 352	Modern Philosophy	3
PHL 375	Ethical Theory	3
Select two seminars from: (Satisfies CAP Major Capstone)		6
PHL 440	Seminar - Advanced Problems in Philosophy	
PHL 451	Seminar - Individual Philosophers	
PHL 461	Seminar - Contemporary Epistemology	
PHL 462	Seminar - Contemporary Ethics	
PHL 463	Seminar - Contemporary Metaphysics	

### Select one track from:

<b>Ethics and Social Justice</b>		15
Select two courses from:		
PHL 307	Philosophy & Women	
PHL 310	Social Philosophy	
PHL 312	Ethics	
PHL 313	Business Ethics	
PHL 314	Philosophy of Law	
PHL 315	Medical Ethics	

PHL 316	Engineering Ethics
PHL 317	Ethics & Modern War
PHL 318	Family Ethics
PHL 319	Information Ethics
PHL 321	Environmental Ethics ,Environmental Ethics
PHL 327	Philosophy of Peace
PHL 328	Philosophy of Punishment
PHL 357	Radical Philosophy
PHL 358	Marxist Philosophy
PHL 364	Race, Gender & Philosophy
PHL 370	Political Philosophy
PHL 371	Philosophy & Human Rights
PHL 372	Values & Economics
PHL 373	Philosophy & Cultural Diversity

Philosophy electives (9 hours)

#### History of Philosophy 15

Select two courses from:

PHL 351	Medieval Philosophy
PHL 353	Kant & Nineteenth-Century Philosophy
PHL 354	Twentieth-Century Philosophy
PHL 361	American Philosophy

Philosophy electives (9 hours)

#### Science, Technology, and Values 15

PHL 330	Philosophy of Science
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Select one course from:

PHL 306	Philosophy of Knowledge
PHL 315	Medical Ethics
PHL 316	Engineering Ethics
PHL 319	Information Ethics
PHL 321	Environmental Ethics ,Environmental Ethics
PHL 331	Science, Objectivity & Values
PHL 332	Technology & Values
PHL 333	Philosophy & Cognitive Science
PHL 334	Philosophy & Ecology

Philosophy electives (9 hours)

#### Religion, Mind, and Metaphysics 15

PHL 308	Metaphysics
or PHL 311	Philosophy of Religion

Select one course from:

PHL 309	Philosophy of Mind
PHL 351	Medieval Philosophy
PHL 355	Asian Philosophy
PHL 356	Christian Philosophy
PHL 360	Existentialism
PHL 365	Islamic Philosophy & Culture

Philosophy electives (9 hours)

#### Culture and Human Diversity 15

Select two courses from:

PHL 307	Philosophy & Women
PHL 355	Asian Philosophy
PHL 361	American Philosophy
PHL 363	African Philosophy

PHL 364	Race, Gender & Philosophy
PHL 365	Islamic Philosophy & Culture
PHL 373	Philosophy & Cultural Diversity

Philosophy electives (9 hours)

#### Arts and Human Expression 15

Select two courses from:

PHL 320	Philosophy of Art
PHL 323	Philosophy & Literature
PHL 324	Philosophy & Film
PHL 325	Philosophy of Music
PHL 362	Philosophy of Language

Philosophy electives (9 hours)

#### Self-Designed 15

Philosophy electives (15 hours)

#### Breadth

ASI 150	Introduction to the University Experience	1
Total Hours to total at least		124

- 1 Includes CAP Components
- 2 PHL courses are not applicable to CAP Advanced Studies.
- 3 Students who anticipate graduate work in philosophy are advised to take PHL 302.

## Minor in Philosophy (phi)

#### Philosophy

PHL 103	Intro To Philosophy	3
PHL 301	Practical Logic	3
or PHL 302	Symbolic Logic	

Select one course from: 3

PHL 350	Classical Greek Philosophy
PHL 351	Medieval Philosophy
PHL 352	Modern Philosophy
PHL 353	Kant & Nineteenth-Century Philosophy
PHL 354	Twentieth-Century Philosophy

Select one PHL seminar (400 level) 3

Select two PHL courses 6

Total Hours 18

#### First Year

Fall	Hours Spring	Hours
ASI 150	1 ASI 120	8
ASI 110	7 Language	4
CMM 100	3 MTH (CAP Mathematics)	3
Language	4	
	15	15

#### Second Year

Fall	Hours Spring	Hours
SSC 200 (satisfies CAP Social Science)	3 PHL 240	1
PHL 301 or 302	3 PHL 350	3
INSS (CAP Natural Science)	4 PHL 352	3
Literature	3 CAP Arts	3



Language	3 INSS (CAP Natural Science)	3
	Social Science	3
	<b>16</b>	<b>16</b>
<b>Third Year</b>		
<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
PHL 375	3 Adv HST	3
Creative & Performing Arts	3 Adv REL (CAP Faith Trad)	3
INSS (CAP Inquiry)	4 PHL Major Track	3
PHL Major Track	3 PHL Major Track	3
Social Science	3 Social Science	3
	<b>16</b>	<b>15</b>
<b>Fourth Year</b>		
<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
Adv REL	3 Diversity and Social Justice	3
CAP Integrative	3 PHL Major Track	3
PHL Seminar (Capstone)	3 PHL Seminar (Capstone)	3
PHL Major Track	3 General elective	3
General elective	3 General elective	3
General elective	1	
	<b>16</b>	<b>15</b>

Total credit hours: 124

## Courses

### PHL 103. Introduction to Philosophy. 3 Hours

Introduction to philosophical reflection and study of some central philosophical questions in the Western intellectual tradition, including questions of ethics, human knowledge, and metaphysics. Readings from major figures in the history of philosophy such as Plato, Aristotle, Augustine, Aquinas, Descartes, Hume, and Kant.

### PHL 103H. Introduction to Philosophy. 3 Hours

Introduction to philosophical reflection and study of some central philosophical questions in the Western intellectual tradition, including questions of ethics, human knowledge, and metaphysics. Readings from major figures in the history of philosophy such as Plato, Aristotle, Augustine, Aquinas, Descartes, Hume, and Kant.

### PHL 240. Research Methodologies & Technologies. 1 Hour

Development of research skills appropriate for the major. Students submit papers carefully selected from written work required for major classes. Required for all Philosophy majors. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

### PHL 301. Practical Logic. 3 Hours

Introduction to the principles of correct reasoning; techniques for the evaluation of arguments; common fallacies in argumentation; applications to current issues in ethics and other areas.

### PHL 302. Symbolic Logic. 3 Hours

Concentrated study of the valid forms of deductive argument and proof in propositional logic and in predicate logic; study of formal systems and of logic and language. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

### PHL 302H. Symbolic Logic. 3 Hours

Concentrated study of the valid forms of deductive argument and proof in propositional logic and in predicate logic; study of formal systems and of logic and language. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

### PHL 304. Philosophy of Human Nature. 3 Hours

The nature of human beings; the functions of consciousness, the possibility of freedom, the sources of values, and the goals of human life. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

### PHL 306. Philosophy of Knowledge. 3 Hours

Various criteria, origins, and definitions of knowledge proposed by common sense, science, philosophy, and mysticism; questions of evidence, consistency, and validity pertaining to the problem of truth and belief. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

### PHL 307. Philosophy & Women. 3 Hours

Issues and problems related to feminist analysis of society and its ideals, such as equal opportunity, sex roles and gender, reverse discrimination, violence, and language. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

### PHL 308. Metaphysics. 3 Hours

Issues and problems under such topics as appearance and reality; universals; relations of mind and matter; the nature of persons and personal identity; causality; freedom and determination. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

### PHL 309. Philosophy of Mind. 3 Hours

An analysis of the concept of mind and related issues such as Descartes' mind-body dualism and various responses; the nature of human agency, self-deception; and the rationality of emotions. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

### PHL 310. Social Philosophy. 3 Hours

The concepts of liberty, justice, and equality as they relate to social problems such as punishment and rehabilitation, insanity and responsibility, privacy, population regulation, economic injustice, environmental degradation, discrimination, and reverse discrimination. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

### PHL 311. Philosophy of Religion. 3 Hours

The main issues involved in religious belief and practice, such as the relationship between reason and revelation; critical presentation of views of main writers in the field. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

### PHL 312. Ethics. 3 Hours

Various types of moral and ethical theory in the Western tradition and major problems such as the extent of human responsibility and the conditions for making ethical judgments. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

### PHL 313. Business Ethics. 3 Hours

Review of general ethical theory; ethical assessments of incidents that often occur in commerce affecting employees, employers, consumers, competitors, or the local community. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

### PHL 313H. Business Ethics. 3 Hours

Review of general ethical theory; ethical assessments of incidents that often occur in commerce affecting employees, employers, consumers, competitors, or the local community. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

### PHL 314. Philosophy of Law. 3 Hours

Major concepts of law to include the nature of law, legal reasoning, liberty, justice, responsibility, punishment. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

### PHL 315. Medical Ethics. 3 Hours

Introduction to morality in general and inquiry into the major moral problems of medical practice: human life and the preservation of its integrity. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

**PHL 315H. Medical Ethics. 3 Hours**

Introduction to morality in general and inquiry into the major moral problems of medical practice: human life and the preservation of its integrity. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

**PHL 316. Engineering Ethics. 3 Hours**

Introduction to ethical issues in engineering by developing theories of moral justification and codes of ethics for engineers, and by applying these theories and codes to moral issues in engineering. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

**PHL 316H. Engineering Ethics. 3 Hours**

Introduction to ethical issues in engineering by developing theories of moral justification and codes of ethics for engineers, and by applying these theories and codes to moral issues in engineering. Prerequisite(s): (ASI 111, ASI 112) or PHL 103.

**PHL 317. Ethics & Modern War. 3 Hours**

Study in applied ethics focusing on the implications of power politics and militarism; various ethical approaches used to evaluate wars, terrorism and violence; and an overview of some alternatives to war. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

**PHL 318. Family Ethics. 3 Hours**

Introduction to the development of the concept of a family in the tradition of Western philosophy and the philosophic analysis of contemporary ethical problems in marriage and in parenthood. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

**PHL 319. Information Ethics. 3 Hours**

Examination of ethical principles, codes, cases, incidents, and issues in the design, implementation, and use of computerized information systems. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

**PHL 319H. Information Ethics. 3 Hours**

Examination of ethical principles, codes, cases, incidents, and issues in the design, implementation, and use of computerized information systems. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

**PHL 320. Philosophy of Art. 3 Hours**

Theories of art and criteria of evaluation developed by philosophers, artists, and critics; the relationship between art and society and between artistic and other human values. Prerequisite(s): Introduction to morality in general and inquiry into the major moral problems of medical practice: human life and the preservation of its integrity. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

**PHL 321. Environmental Ethics. 3 Hours**

Study of the principal ethical perspectives on the treatment of animals and nature including such issues as agriculture, energy, pollution, and economics; assessment of political responses to current environmental problems. Prerequisite(s): PHL 103 or ASI 120.

**PHL 321H. Environmental Ethics. 3 Hours**

Study of the principal ethical perspectives on the treatment of animals and nature including such issues as agriculture, energy, pollution, and economics; assessment of political responses to current environmental problems. Prerequisite(s): PHL 103 or ASI 112 or ASI 120.

**PHL 322. Philosophy and Theatre/Dance: Performing Human Identity. 3 Hours**

An interdisciplinary and advanced philosophy course with two components: 1) theoretical, focusing on the philosophy of dance or theatre and the philosophy of human identity, and 2) dance or theatre, where students will learn to use dance or theatre to express personal identity. Prerequisite(s): PHL 103.

**PHL 323. Philosophy & Literature. 3 Hours**

Critical examination of philosophical concepts in selected literary masterpieces, ancient and modern. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

**PHL 323H. Philosophy & Literature. 3 Hours**

Critical examination of philosophical concepts in selected literary masterpieces, ancient and modern. Prerequisite(s): (ASI 111, ASI 112) or PHL 103.

**PHL 324. Philosophy & Film. 3 Hours**

Introduction to philosophical issues and aesthetic theory through a critical reading of texts and examination of selected narrative, documentary, animated, or abstract films. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

**PHL 325. Philosophy of Music. 3 Hours**

Examination of theories on the meaning of music; experiencing music as composer, performer, and listener; aesthetic criteria; moral effect of music. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

**PHL 327. Philosophy of Peace. 3 Hours**

Examination of human violence and ethical justifications for war and exploration of resolutions for human conflict in processes such as pacifism, peacemaking, democratic world governance, nonviolent caring, and a sustainable economy. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

**PHL 328. Philosophy of Punishment. 3 Hours**

Critical examination of punishment, through an analysis of various forms of punishment and what they imply about human nature, power, social norms, and moral principles. Prerequisite(s): ASI 120 or PHL 103.

**PHL 330. Philosophy of Science. 3 Hours**

Critical examination of the underpinnings of scientific knowledge, and how it differs from other systems of belief and knowledge, through an analysis and evaluation of various scientific concepts such as scientific laws, explanation, observation, and theory, with an exploration of the methods, presuppositions, and biases of scientific knowledge claims. Prerequisite(s): (ASI 120 or PHL 103).

**PHL 331. Science, Objectivity & Values. 3 Hours**

Study of three interrelated issues: the limits of scientific methodology; science as a social institution; and science and human values. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

**PHL 332. Technology & Values. 3 Hours**

Study of the social impact of technology-scientists' responsibility; technological change and social change; the 'technological fix'; democracy and the new technological elite; counter-culture critiques of technology. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

**PHL 333. Philosophy & Cognitive Science. 3 Hours**

Philosophical introduction to recent research in cognitive psychology, artificial intelligence, and neuroscience regarding human, animal, and machine intelligence; the relation between mind, brain, and personhood; and the biology of conscious states. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

**PHL 334. Philosophy & Ecology. 3 Hours**

An examination of the epistemological, methodological, ontological, and value issues of ecology, with a focus on how these issues affect the debates in philosophy of science. Prerequisite(s): ASI 120 or PHL 103.

**PHL 340. Special Problems in Philosophy. 1-3 Hours**

Examination of perennial and contemporary problems of philosophy. May be repeated when topic changes. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

**PHL 345. Philosophy Scholars' Seminar. 3 Hours**

Study and seminar discussion of selected major philosophical works and the analysis, interpretation, and criticism of these works. Open by permission only to students in the Berry Scholars Program.

Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

**PHL 350. Classical Greek Philosophy. 3 Hours**

The Greek origins of Western scientific, philosophical, and political thought; relationships to current thoughts; ideas of the pre-Socratics, Plato, and Aristotle in their cultural contexts. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

**PHL 350H. Classical Greek Philosophy. 3 Hours**

The Greek origins of Western scientific, philosophical, and political thought; relationships to current thoughts; ideas of the pre-Socratics, Plato, and Aristotle in their cultural contexts. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

**PHL 351. Medieval Philosophy. 3 Hours**

Major philosophical problems from the fourth through the sixteenth centuries and their importance in shaping current beliefs and traditions in the Augustinian, Jewish, Islamic, Persian, Thomist, and Oxford cultural settings; human action, conscience, freedom, and law. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

**PHL 351H. Medieval Philosophy. 3 Hours**

Major philosophical problems from the fourth through the sixteenth centuries and their importance in shaping current beliefs and traditions in the Augustinian, Jewish, Islamic, Persian, Thomist, and Oxford cultural settings; human action, conscience, freedom, and law. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

**PHL 352. Modern Philosophy. 3 Hours**

Development of philosophy in the seventeenth and eighteenth centuries up to Kant with a focus on several major philosophical figures such as Descartes, Spinoza, Leibniz, Locke, Berkeley, and Hume. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

**PHL 352H. Modern Philosophy. 3 Hours**

Development of philosophy in the seventeenth and eighteenth centuries up to Kant with a focus on several major philosophical figures such as Descartes, Spinoza, Leibniz, Locke, Berkeley, and Hume. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

**PHL 353. Kant & Nineteenth-Century Philosophy. 3 Hours**

Development of philosophy beginning with Kant through the nineteenth century including Kant and philosophers such as Fichte, Schelling, Hegel, Schopenhauer, Nietzsche, James, Peirce, and Frege. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

**PHL 353H. Kant & Nineteenth-Century Philosophy. 3 Hours**

Development of philosophy beginning with Kant through the nineteenth century including Kant and philosophers such as Fichte, Schelling, Hegel, Schopenhauer, Nietzsche, James, Peirce, and Frege. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

**PHL 354. Twentieth-Century Philosophy. 3 Hours**

Study of some of the major philosophical movements in the twentieth century including phenomenology, existentialism, critical theory (Frankfurt School), hermeneutics, and analytic philosophy. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

**PHL 355. Asian Philosophy. 3 Hours**

Introduction to Asian philosophy through the study of philosophers, texts, philosophical schools and concepts that have their origins in Asia. Comparisons of various Asian philosophies with each other as well as with western traditions. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

**PHL 356. Christian Philosophy. 3 Hours**

Major issues such as the relation of faith to reason, the relation of science to faith, and the problem of natural law. Christian considerations of practical philosophy and social theory. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

**PHL 357. Radical Philosophy. 3 Hours**

Study of major attempts to develop a critical understanding of society; analysis of theories such as socialism, anarchism, feminism, critical theory, and critical race theory. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

**PHL 358. Marxist Philosophy. 3 Hours**

Introduction to the thought of Karl Marx through a study of the historical setting of the man and his writings, along with recent interpretations of his thought. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

**PHL 358H. Marxist Philosophy. 3 Hours**

Introduction to the thought of Karl Marx through a study of the historical setting of the man and his writings, along with recent interpretations of his thought. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

**PHL 360. Existentialism. 3 Hours**

Major themes in representatives of the existentialist movement, such as human freedom, the absurdity of human existence, the primacy of action, and the roles of speculation and the emotions. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

**PHL 361. American Philosophy. 3 Hours**

Study of the development of American philosophies in the context of historical interactions among Indigenous, European, African, and Asian worldviews in the Americas. Representatives of classical American pragmatism, such as Peirce, James, Dewey, and Addams will be studied in this context. Prerequisite(s): ASI 120 or PHL 103.

**PHL 362. Philosophy of Language. 3 Hours**

Theories of meaning and reference and their philosophical significance. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

**PHL 363. African Philosophy. 3 Hours**

Introduction to African world views, ethical notions, and social ideas using analytical and comparative approaches; examination of concepts of human diversity and universality; analysis of the transition of traditional African culture to modernity. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

**PHL 364. Race, Gender & Philosophy. 3 Hours**

Philosophical investigation into the systematic nature of racism and sexism, including inquiry into the epistemological, metaphysical, linguistic, and representational structures that sustain and perpetuate the power dynamics of western post-colonial patriarchal society. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

**PHL 365. Islamic Philosophy & Culture. 3 Hours**

Examination of selected Islamic thinkers and philosophical traditions, from the period of the Umayyad Caliphate to the postcolonial era, and their influence on Christian and Jewish thought. Islamic conceptions of law, political society, ethics, hermeneutics, science, revelation, and reality. Special emphasis upon the role of the arts in shaping Islamic philosophy. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

**PHL 370. Political Philosophy. 3 Hours**

Philosophical theories regarding the nature of the state and the legitimization of political authority will be analyzed and evaluated in the context of philosophical conceptions of human nature, liberty, equality, justice, welfare, and power. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

**PHL 371. Philosophy & Human Rights. 3 Hours**

Examination of the nature and philosophical foundations of universal moral (human) rights; and application of human rights theory to issues and cases involving civil and political rights, and rights to equality, security, subsistence, education, welfare, employment, and health care. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

**PHL 372. Values & Economics. 3 Hours**

An inquiry into the impact of values and beliefs on the generation of modern economic forces. Analyzing capitalism as a system of validation of beliefs and values, the course relates underdevelopment with the conflict between tradition and modernity. It then reflects on the conditions of change liable to promote global expansion. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

**PHL 373. Philosophy & Cultural Diversity. 3 Hours**

Philosophical investigation into historical, social, and political dimensions of human diversity in its various manifestations. Topics include colonialism, racism, multiculturalism, nationalism, and democracy.

**PHL 373H. Philosophy & Cultural Diversity. 3 Hours**

Philosophical investigation into historical, social, and political dimensions of human diversity in its various manifestations. Topics include colonialism, racism, multiculturalism, nationalism, and democracy.

**PHL 375. Ethical Theory. 3 Hours**

An examination of the significant ethical theories offered by historically significant philosophers along with some contemporary critiques of these theories. The theories examined will include virtue, deontological, and utilitarian approaches. Prerequisite(s): ASI 120 or PHL 103.

**PHL 375H. Ethical Theory. 3 Hours**

An examination of the significant ethical theories offered by historically significant philosophers along with some contemporary critiques of these theories. The theories examined will include virtue, deontological, and utilitarian approaches. Prerequisite(s): ASI 120 or PHL 103.

**PHL 376. Philosophy & Revolution. 3 Hours**

No description available.

**PHL 377. Philosophy & Mass Media. 3 Hours**

No description available.

**PHL 378. The Self Concept: Reality or Social Construct?. 3 Hours**

The concept of a 'self' is one of the more elusive concepts in reflections on what it means to be human. Starting with (i) the Cartesian model of self as a metaphysically distinct, nonphysical entity, the course then explores (ii) Asian (particularly Buddhist) speculations on self as a linguistic fiction. Students are then introduced to (iii) recent cognitive science modeling of self and personal identity as instances of embodied/situated cognition, followed by contributions from the social sciences, including (iv) sociological theories of self as a social construct, as well as (v) clinical case studies of autistic, pathological, and fragmented selves. Prerequisite(s): PHL 103.

**PHL 379. Latin America Philosophy. 3 Hours**

This course will provide a background to the history of internal debates in Latin American philosophy beginning with the colonial period which takes the Spanish Conquest of 1492 as its point of departure. We will think through the debates pertaining to the identity of Pre-Columbian Indians. In order to expand our knowledge we will transition to the Independentist and Positivist periods in which key political theorist/activists address the themes of breaking free from the Spanish Empire and eventually articulating principles to guide the process of nation building and nation fixing in the new postcolonial nations of Latin America. We will then shift to the contemporary period and discuss the theme of nation transcending that plays itself out in debates on poverty, education, plurination-states and the potentials and challenges with reconfiguring society in such a way that considers indigenous cosmovisions. Pre-requisite(s): PHL 103 or (ASI 110, ASI 120).

**PHL 380. Language & Our World. 3 Hours**

No description available.

**PHL 381. Sexual Ethics. 3 Hours**

This course will cover various philosophical issues in sexual ethics, including the following: the proper meaning and role of sex within human life; the existence and content of any "natural law(s)" governing sexual activity; the relations between sex, love, and marriage; the meaning and value of sexual freedom; the moral status of homosexuality and same-sex marriage; the meaning and importance of sexual consent; sexual objectification; and the commodification of sex and (mostly) women's bodies in prostitution and pornography. Special attention will be devoted both to Catholic perspectives and to contemporary feminist perspectives on sexual ethics.

**PHL 382. Culture, Modernization, Multiple Modernities. 3 Hours**

The course surveys representative and contending theories of modernization with the view of unraveling the role of values and beliefs in the modernization process. It reexamines the role of culture in light of the opportunities offered by globalization and the associated rise of diverse modernities. Pre-requisite(s): PHL 103 or (ASI 110, ASI 120).

**PHL 383. Ethics of Scientific Research. 3 Hours**

Inquiry into the main ethical problems of scientific research and the moral principles for resolving them. Prerequisite(s): PHL 103.

**PHL 440. Seminar - Advanced Problems in Philosophy. 3 Hours**

Detailed examination of some of the more technical problems of philosophy as well as those problems that arise in interdisciplinary settings upon which philosophers have brought their technical skills to bear. May be repeated when topic varies. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

**PHL 440H. Seminar - Advanced Problems in Philosophy. 3 Hours**

Detailed examination of some of the more technical problems of philosophy as well as those problems that arise in interdisciplinary settings upon which philosophers have brought their technical skills to bear. May be repeated when topic varies. Prerequisite(s): (ASI 111, ASI 112) or PHL 103.

**PHL 451. Seminar - Individual Philosophers. 3 Hours**

Detailed examination of the thought of an individual philosopher (e.g., Aquinas, Kant, Rawls, Quine) who is of sufficient importance to warrant special study. May be repeated when topic varies. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.



**PHL 451H. Seminar - Individual Philosophers. 3 Hours**

Detailed examination of the thought of an individual philosopher (e.g., Aquinas, Kant, Rawls, Quine) who is of sufficient importance to warrant special study. May be repeated when topic varies. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

**PHL 461. Seminar - Contemporary Epistemology. 3 Hours**

Study of recent philosophical work in the theory of knowledge inclusive of scepticism, knowledge and belief, evidence and justification, theories of perception and knowledge, human interests and valuation. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

**PHL 461H. Seminar - Contemporary Epistemology. 3 Hours**

Study of recent philosophical work in the theory of knowledge inclusive of scepticism, knowledge and belief, evidence and justification, theories of perception and knowledge, human interests and valuation. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

**PHL 462. Seminar - Contemporary Ethics. 3 Hours**

Study of recent philosophical work in ethics inclusive of an analysis of ethical concepts, theories of normative ethics, theories of human action, and moral justification. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

**PHL 462H. Seminar - Contemporary Ethics. 3 Hours**

Study of recent philosophical work in ethics inclusive of an analysis of ethical concepts, theories of normative ethics, theories of human action, and moral justification. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

**PHL 463. Seminar - Contemporary Metaphysics. 3 Hours**

Study of recent work in metaphysics inclusive of the nature of metaphysics, causality, free will and determinism, personal identity and the theory of mind and body. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

**PHL 463H. Seminar - Contemporary Metaphysics. 3 Hours**

Study of recent work in metaphysics inclusive of the nature of metaphysics, causality, free will and determinism, personal identity and the theory of mind and body. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.

**PHL 477H. Honors Thesis. 3 Hours**

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

**PHL 478H. Honors Thesis. 3 Hours**

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

**PHL 490. Directed Readings. 1-4 Hours**

Guided independent study primarily for philosophy majors but open to students who have completed twelve semester hours in philosophy. Normally three semester hours but in certain cases the chairperson may approve one, two, or four semester hours. May be repeated when topic changes. Prerequisite(s): (ASI 110, ASI 120) or PHL 103.; permission of department chairperson and instructor.

**PHL 492. Directed Research. 3 Hours**

Faculty-directed research for philosophy majors who have completed all 300-level requirements and at least one 400-level seminar. Students will write a substantial paper in relation to this research. Prerequisite(s): (ASI 110, ASI 120) or PHL 103; permission of department chairperson and instructor.

**PHL 495. Internship. 1-3 Hours**

Supervised practical and professional experience related to philosophy for philosophy majors who have completed prescribed course work. May be repeated to a maximum of three semester hours. Grading Option Two only. Prerequisite(s): (ASI 110, ASI 120) or PHL 103, PHL 302, PHL 350, PHL 352; one 400-level seminar; permission of department chairperson.

## Physics

- Bachelor of Science, Physical Science (p. 242)
- Bachelor of Science, Physics (p. 243)
- Bachelor of Science, Physics-Computer Science (p. 244)

### Minor

- Physics (p. 245)

The program leading to the Bachelor of Science with a major in physics is designed to provide a strong yet versatile basis for a subsequent scientific career or advanced study. Minimum requirements for all majors are listed below, but students planning for graduate work in physics or an allied area are advised to select additional mathematics and physics courses. A physics major must complete all 300-400-level courses with a 2.0 minimum grade-point average.

Students have the option of adding a multidisciplinary concentration in electro-optics to their physics degree. The concentration is appropriate for physics majors who wish to pursue possible careers in photonics or graduate degrees in the area of optics.

PHY, PSC, and PCS majors are required to attain a grade of C- or better in all physics and math courses that are prerequisite courses for physics courses required of majors.

A minor in physics consists of twelve semester hours.

### Faculty

John Erdei, Chairperson

Distinguished Service Professor: O'Hare

Professors Emeriti: Berney, Graham, Kepes, Miner, O'Hare, Yaney

Professors: Brecha, Elhamri, Ewvaraye, Pedrotti

Associate Professors: Ahoujja, Craver, J. Erdei, Smith

Assistant Professor: Agha, Chong, Mathews

Lecturers: Kariyawasam, Song

Lab Instructors: Ballard, L. Erdei, Schaurer

## Bachelor of Science with a major in Physical Science (psc) Minimum 120 Hours

The Physical Science Program is administered by the Department of Physics. It provides a broad training in the physical sciences that is desirable for one who plans to pursue a goal built on a composite science background. The physical science major combines adequate physics, chemistry, geology, and mathematics to provide a sound working knowledge of physical science. Since the program is less specialized than one in a single science, it has provision for adequate

course selections and sufficient electives to provide the opportunity for concentrated study in a discipline chosen to meet the career objectives of the individual student.

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
HST 103 West and the World	
REL 103 Introduction to Religious and Theological Studies	
PHL 103 Intro To Philosophy	
ENG 100 Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>	0-3
ENG 200 Writing Seminar II	
Oral Communication	3
CMM 100 Principles of Oral Communication	
Mathematics	3
Social Science	3
Arts	3
Natural Sciences <sup>4</sup>	7
Crossing Boundaries	variable credit
Faith Traditions	
Practical Ethical Action	
Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

### Major Requirements 54

(Satisfies CAP Natural Science)

CHM 123 & 123L	General Chemistry and General Chemistry Laboratory	4
CHM 124 & 124L	General Chemistry and General Chemistry Laboratory	4
GEO 115 & 115L	Physical Geology and Physical Geology Laboratory	4
GEO 116 & 116L	Geological History of the Earth and Geological History of the Earth Laboratory	4
PHY 206	General Physics I - Mechanics	3
PHY 207	General Physics II - Electricity & Magnetism	3
PHY 208	General Physics III - Mechanics of Waves	3
PHY 210L	General Physics Laboratory	1
PHY 211L	General Physics Laboratory II	1

PHY 480	Capstone Project & Presentation (Satisfies CAP Major Capstone)	1
Physical science courses (300/400 level) <sup>1</sup>		26

## Bachelor of Science with a major in Physics (phy) Minimum 120 Hours

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
HST 103 West and the World	
REL 103 Introduction to Religious and Theological Studies	
PHL 103 Intro To Philosophy	
ENG 100 Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>	0-3
ENG 200 Writing Seminar II	
Oral Communication	3
CMM 100 Principles of Oral Communication	
Mathematics	3
Social Science	3
Arts	3
Natural Sciences <sup>4</sup>	7
Crossing Boundaries	variable credit
Faith Traditions	
Practical Ethical Action	
Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

### Science Breadth Requirements

CHM 123 & 123L	General Chemistry and General Chemistry Laboratory (Applies to CAP Natural Science)	4
CHM 124 & 124L	General Chemistry and General Chemistry Laboratory	4
CPS 132 or CPS 150	Computer Programming for Engineering & Science (Applies to CAP Natural Science) Algorithms & Programming I	3
MTH 168	Analytic Geometry & Calculus I (Satisfies CAP Mathematics)	4
MTH 169	Analytic Geometry & Calculus II	4

MTH 218	Analytic Geometry & Calculus III	4
MTH 219	Applied Differential Equations	3
MTH 310	Linear Algebra & Matrices	3

### Major Requirements

Select one concentration from:

#### General Physics Concentration 37

PHY 206	General Physics I - Mechanics	3
PHY 207	General Physics II - Electricity & Magnetism	3
PHY 208	General Physics III - Mechanics of Waves	3
PHY 210L	General Physics Laboratory	1
PHY 211L	General Physics Laboratory II	1
PHY 301	Thermal Physics	3
PHY 303	Intermediate Mechanics I	3
PHY 333	Digital & Analog Electronics for Scientists	3
PHY 390	Introduction to Quantum Mechanics	3
PHY 408	Intermediate Electricity & Magnetism I	3
PHY 430	Advanced Lab I	2
PHY 431	Advanced Lab II	2
PHY 480	Capstone Project & Presentation (Satisfies CAP Major Capstone)	1
PHY electives (300/400 level)		6

#### Physics and Electro-Optics Concentration 43

ECE 443	Introduction to Electro-Optics	3
PHY 206	General Physics I - Mechanics (Applies to Cap Natural Science)	3
PHY 207	General Physics II - Electricity & Magnetism	3
PHY 208	General Physics III - Mechanics of Waves	3
PHY 210L	General Physics Laboratory	1
PHY 211L	General Physics Laboratory II	1
PHY 301	Thermal Physics	3
PHY 303	Intermediate Mechanics I	3
PHY 333	Digital & Analog Electronics for Scientists	3
PHY 390	Introduction to Quantum Mechanics	3
PHY 404	Physical Optics	3
PHY 408	Intermediate Electricity & Magnetism I	3
PHY 430	Advanced Lab I	2
PHY 431	Advanced Lab II	2
PHY 480	Capstone Project & Presentation (Satisfies CAP Major Capstone)	1

Select two courses from: 6

EOP 501	Geometric Optics
EOP 502	Optical Radiation & Matter
EOP 505	Introduction to Lasers
EOP 506	Electro-Optical Devices & Systems
or ECE 573	Electro-Optical Devices & Systems
EOP 514	Guided-Wave Optics
or ECE 574	Guided Wave Optics

#### Breadth

ASI 150	Introduction to the University Experience	1
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Social Science and Behavioral Science (Includes CAP Social Science)	6
Total Hours to total at least	120

## Bachelor of Science with a major in Physics-Computer Science (pcs) Minimum 120 Hours

This combined program in physics and computer science leading to the Bachelor of Science with a major in Physics-Computer Science emphasizes the use of computer software in scientific applications and at the same time gives a foundation in the scientific disciplines of physics and computer science. Minimum requirements for the degree are listed below. Students are advised to select additional computer science, mathematics, and physics courses as electives. For further information contact the Physics Department.

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup> 12

HST 103	West and the World
REL 103	Introduction to Religious and Theological Studies
PHL 103	Intro To Philosophy
ENG 100	Writing Seminar I <sup>2</sup>

Second-Year Writing Seminar <sup>3</sup> 0-3

ENG 200	Writing Seminar II
Oral Communication 3	
CMM 100	Principles of Oral Communication

Mathematics 3

Social Science 3

Arts 3

Natural Sciences <sup>4</sup> 7

Crossing Boundaries variable credit

Faith Traditions

Practical Ethical Action

Inquiry

Integrative

Advanced Study variable credit

Philosophy and/or Religious Studies

Historical Studies

Diversity and Social Justice 3

Major Capstone 0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

### Major Requirements

(Satisfies CAP Mathematics and CAP Natural Science) 72

Computer Science <sup>1</sup> 26

CPS 150	Algorithms & Programming I
CPS 151	Algorithms & Programming II
CPS 250	Computer Organization and Architecture
CPS 346	Operating Systems I
CPS 350	Data Structures & Algorithms
Three CPS courses (340 level or above)	

#### Mathematics 18

MTH 168	Analytic Geometry & Calculus I
MTH 169	Analytic Geometry & Calculus II
MTH 218	Analytic Geometry & Calculus III
MTH 219	Applied Differential Equations
MTH 310	Linear Algebra & Matrices

#### Physics 28-30

PHY 206	General Physics I - Mechanics
PHY 207	General Physics II - Electricity & Magnetism
PHY 208	General Physics III - Mechanics of Waves
PHY 210L	General Physics Laboratory
PHY 211L	General Physics Laboratory II
PHY 323	Computational Physics
PHY 333	Digital & Analog Electronics for Scientists
PHY 480	Capstone Project & Presentation (Satisfies CAP Major Capstone)

Four PHY courses (300/400 level)

## Minor in Physics (phy)

#### Physics 12

Select four PHY courses (300/400 level)

Total Hours 12

- Bachelor of Science, Physical Science (p. 245)
- Bachelor of Science, Physics (p. 245)
- Bachelor of Science, Physics- Computer Science (p. 246)

## Bachelor of science, Physical Science

#### First Year

Fall	Hours Spring	Hours
ASI 150	1 PHY 207 & PHY 211L	4
PHY 206 & PHY 210L	4 CHM 124 & 124L	4
MTH 168	4 MTH 169	4
CPS 150	4 REL 103, PHL 103, or HST 103 (satisfies CAP Humanities)	3
ENG 100 (satisfies CAP Writing Seminar)	3 REL 103, PHL 103, or HST 103 (satisfies CAP Humanities)	3
	<b>16</b>	<b>18</b>

#### Second Year

Fall	Hours Spring	Hours
PHY 208	3 GEO 116 & 116L	4
GEO 115 & 115L	4 PHY elective	3

MTH 218	4 Social Science (CAP)	3
REL 103, PHL 103, or HST 103 (satisfies CAP Humanities)	3 MTH 219	3
ENG 200	3 CMM 100 (satisfies CAP Communication)	3
	<b>17</b>	<b>16</b>

#### Third Year

Fall	Hours Spring	Hours
CPS 132 or 150	3-4 PHY elective	3
PHY elective	3 PHY elective	3
PHY elective	3 Social Science	3
Arts	3 Adv HST	3
Adv PHL/REL (PEA/FT)	3 Adv PHL/REL (PEA/FT)	3
	<b>15-16</b>	<b>15</b>

#### Fourth Year

Fall	Hours Spring	Hours
PHY 480 (capstone)	1 PHY elective	3
PHY elective	3 PHY elective	3
PHY elective	2 Integrative	3
Inquiry	3 Diversity and Social Justice	3
General Elective	1 General Elective (optional)	3
General Elective (optional)	3	
General Elective (optional)	3	
	<b>16</b>	<b>15</b>

Total credit hours: 128-129

## Bachelor of Science, Physics

#### First Year

Fall	Hours Spring	Hours
ASI 150	1 PHY 207 & PHY 211L	4
PHY 206 & PHY 210L	4 CHM 124 & 124L	4
CHM 123 & 123L	4 MTH 169	4
MTH 168	4 REL 103, PHL 103, or HST 103 (satisfies CAP Humanities)	3
ENG 100 (satisfies CAP Writing Seminar)	3 REL 103, PHL 103, or HST 103 (satisfies CAP Humanities)	3
	<b>16</b>	<b>18</b>

#### Second Year

Fall	Hours Spring	Hours
PHY 208	3 PHY 303	3
CPS 132 or 150	3-4 MTH 219	3
MTH 218	4 CMM 100 (satisfies CAP Communication)	3
REL 103, PHL 103, or HST 103 (satisfies CAP Humanities)	3 Social Science (CAP)	3
ENG 200	3 Arts	3
	<b>16-17</b>	<b>15</b>



**Third Year**

Fall	Hours Spring	Hours
PHY 301	3 PHY 408	3
PHY 333	3 PHY elective	3
PHY 390	3 Social Science	3
MTH 310	3 Adv HST	3
Adv PHL/REL (PEA?FT)	3 Adv PHL/REL (PEA/FT)	3
	<b>15</b>	<b>15</b>

**Fourth Year**

Fall	Hours Spring	Hours
PHY 480 (capstone)	1 PHY 431	2
PHY 430	2 PHY elective	3
Inquiry	3 Integrative	3
General Elective	3 Diversity and Social Justice	3
General Elective	3 General Elective (optional)	3
General Elective	3 General Elective (optional)	3
	<b>15</b>	<b>17</b>

Total credit hours: 127-128

**Bachelor of Science, physics- computer science****First Year**

Fall	Hours Spring	Hours
ASI 150	1 PHY 207 & PHY 211L	4
PHY 206 & PHY 210L	4 CPS 151	4
CPS 150	4 MTH 169	4
MTH 168	4 REL 103, PHL 103, or HST 103 (satisfies CAP Humanities)	3
ENG 100 (satisfies CAP Writing Seminar)	3 REL 103, PHL 103, or HST 103 (satisfies CAP Humanities)	3
	<b>16</b>	<b>18</b>

**Second Year**

Fall	Hours Spring	Hours
PHY 208	3 PHY 323	3
MTH 218	4 CPS 350	3
CPS 250	3 MTH 219	3
REL 103, PHL 103, or HST 103	3 CMM 100 (satisfies CAP Communication)	3
ENG 200	3 Arts	3
	<b>16</b>	<b>15</b>

**Third Year**

Fall	Hours Spring	Hours
PHY 333	3 CPS 346	3
MTH 310	3 PHY elective	3
CPS elective	3 CPS elective	3
PHY elective	3 Social Science	3
Social Science (CAP)	3 Adv PHL/REL (PEA/FT)	3
	<b>15</b>	<b>15</b>

**Fourth Year**

Fall	Hours Spring	Hours
PHY 480	1 PHY elective	3
CPS elective	3 Adv PHL/REL (PEA/FT)	3
PHY elective	3 Integrative	3
Adv HST	3 Diversity and Social Justice	3
Inquiry	3 General Elective (optional)	3
General Elective (optional)	3	
	<b>16</b>	<b>15</b>

Total credit hours: 126

**Courses****PHY 100. Seminar. 0 Hours**

Opportunity to become acquainted with the broad spectrum of modern science through periodic meetings with the entire department. Invited speakers, films, student presentations, book reviews, and informal discussions. For all physics, physical science, and physics-computer science majors.

**PHY 105. Physical Science - Energy & the Environment. 3 Hours**

General introduction to principles of physics including motion, energy, thermodynamics, electricity and magnetism, and nuclear physics. Applications of these principles to non-renewable and renewable energy systems and the climate. Intended for business students.

**PHY 108. Physical Science of Light & Color. 3 Hours**

Treatment of physical science with emphasis on light, color, and the interaction of light with materials. For nonscience students.

**PHY 108L. Light & Color Laboratory. 1 Hour**

Laboratory experiences to accompany PHY 108. Corequisite(s): PHY 108.

**PHY 201. General Physics. 3 Hours**

Topics from mechanics, thermal and mechanical properties of matter, wave motion and sound, and electricity without the formalism of calculus. First term, each year.

**PHY 201H. General Physics. 3 Hours**

Topics from mechanics, thermal and mechanical properties of matter, wave motion and sound, and electricity without the formalism of calculus. First term, each year.

**PHY 201L. General Physics Laboratory. 1 Hour**

Introductory laboratory appropriate for students of the health sciences. Experimental scientific techniques and the use of standard laboratory equipment. One two-hour period each week. First term, each year. Corequisite(s): PHY 201 or PHY 206.

**PHY 202. General Physics. 3 Hours**

Continuation of PHY 201 with a treatment of electricity and magnetism, wave motion and properties of light, atomic and nuclear physics. Second term, each year. Prerequisite(s): PHY 201.

**PHY 202H. General Physics. 3 Hours**

Continuation of PHY 201 with a treatment of electricity and magnetism, wave motion and properties of light, atomic and nuclear physics. Second term, each year. Prerequisite(s): PHY 201.

**PHY 202L. General Physics Laboratory. 1 Hour**

Experimental scientific techniques and the use of standard laboratory equipment. One two-hour period per week. Second term, each year. Prerequisite(s): PHY 201L.

**PHY 203. Modern Technical Physics. 3 Hours**

Introduction to selected topics in modern physics without the formalism of calculus. For engineering technology students. Prerequisite(s): College algebra, trigonometry, and introductory statics and dynamics.

**PHY 203L. Technical Physics Laboratory. 1 Hour**

Laboratory experiences to accompany PHY 203.

**PHY 206. General Physics I - Mechanics. 3 Hours**

Introductory course in mechanics for students with a strong background in physics. Three lectures, one recitation each week. Corequisite(s): MTH 148 or MTH 168.

**PHY 206H. General Physics I - Mechanics. 3 Hours**

Introductory course in mechanics for students with a strong background in physics. Three lectures, one recitation each week.

**PHY 207. General Physics II - Electricity & Magnetism. 3 Hours**

The basic principles of electricity and magnetism. Three lectures, one recitation each week. Prerequisite(s): PHY 201 or PHY 206. Corequisite(s): MTH 149 or MTH 169.

**PHY 207H. General Physics II - Electricity & Magnetism. 3 Hours**

The basic principles of electricity and magnetism. Three lectures, one recitation each week. Prerequisite(s): PHY 201 or PHY 206. Corequisite(s): MTH 149 or MTH 169.

**PHY 208. General Physics III - Mechanics of Waves. 3 Hours**

Introduction to wave phenomena (including sound, light, and matter waves) leading to basic concepts in modern physics. Prerequisite(s): (MTH 149; PHY 202) or (MTH 169; PHY 207).

**PHY 210L. General Physics Laboratory. 1 Hour**

Introduction to laboratory methods, handling of data, and analysis of results. Experiments appropriate to the background of students with an interest in mathematical and physical sciences. Two hours laboratory, one hour recitation each week. Corequisite(s): PHY 206.

**PHY 211L. General Physics Laboratory II. 1 Hour**

Laboratory methods, data handling, and analysis of results. Experiments appropriate to the background of students with an interest in mathematical and physical sciences. Two hours laboratory, one hour recitation each week. Prerequisite(s): PHY 210L. Corequisite(s): PHY 207.

**PHY 220. Energy & Environmental Physics. 3 Hours**

Introduction to the physical basis of energy systems and the climate. Topics covered will include thermodynamics, planetary radiation balance, heat transfer, basic atmospheric and ocean physics, nuclear energy, renewable energy, modeling of carbon emissions from fossil fuels, simple climate models, monitoring climate change, and mitigation strategies. Prerequisite(s): PHY 206.

**PHY 220H. Energy & Environmental Physics. 3 Hours**

Introduction to the physical basis of energy systems and the climate. Topics covered will include thermodynamics, planetary radiation balance, heat transfer, basic atmospheric and ocean physics, nuclear energy, renewable energy, modeling of carbon emissions from fossil fuels, simple climate models, monitoring climate change, and mitigation strategies. Prerequisite(s): PHY 206.

**PHY 232. The Physics of Waves. 3 Hours**

Physical concept and mathematical relations describing wave phenomena in a variety of physical systems. Topics include oscillation in mechanical and electrical systems, mechanical and electromagnetic waves, geometrical and physical optics and matter waves. Designed for electrical and computer engineering students, but open to all meeting the prerequisites. Prerequisite(s): PHY 206; MTH 169 (may be taken as a corequisite).

**PHY 250. Descriptive Astronomy. 3-4 Hours**

Descriptive survey for students who have had little or no previous exposure to astronomy; material from ancient times to present, including pulsars and quasi-stellar objects.

**PHY 295. Research Participation I. 1 Hour**

No description available.

**PHY 301. Thermal Physics. 3 Hours**

Thermodynamical descriptions of many particle systems obtained from microscopic statistical considerations; laws of thermodynamics, kinetic theory of dilute gases, and Fermi-Dirac and Bose-Einstein statistics. Prerequisite(s): PHY 208 or PHY 232. Corequisite(s): MTH 219.

**PHY 303. Intermediate Mechanics I. 3 Hours**

The fundamental concepts of mechanics: virtual work, kinematics, special theory of relativity, Lagrange's equation and central forces, particle dynamics. Prerequisite(s): PHY 208 or PHY 232. Corequisite(s): MTH 219.

**PHY 321. Atomic & Nuclear Physics. 3 Hours**

Concepts and models of the structure of matter; atoms, ions, electrons and nuclei, radioactivity, interactions of radiation with matter, particle detection, accelerators, nuclear models, nuclear reactions and processes, and fundamental particles. Prerequisite(s): (PHY 208 or PHY 232) or permission of instructor.

**PHY 323. Computational Physics. 3 Hours**

The course will explore how computers are used in physics. Topics will include simulations of physical systems, numerical analysis, and the use of mathematical analysis packages (MATHCAD, for example.) Programming will be done in True BASIC and MATHCAD. Prerequisite(s): MTH 218; (PHY 208 or PHY 232).

**PHY 333. Digital & Analog Electronics for Scientists. 3 Hours**

Basic concepts of digital and analog integrated circuit electronics are developed as a way to understand modern microcomputer based instrumentation. A microcomputer based data collection and analysis system is used to study binary data input and output, analog to digital conversion (ADC) devices, digital to analog conversion (DAC) devices, and other digital integrated circuits and concepts. The analog electronics part of the course begins with a study of discrete analog devices and ends with operational amplifiers and their application. Two hours lecture and two hour laboratories each week. Prerequisite(s): (PHY 202L or PHY 211L) or equivalent.

**PHY 390. Introduction to Quantum Mechanics. 3 Hours**

Basic postulates of quantum mechanics with applications made to atomic physics. Prerequisite(s): MTH 219; (PHY 208 or PHY 232). Corequisite(s): MTH 310.

**PHY 395. Research Participation I. 1-6 Hours**

Individual projects conducted as part of the physics Undergraduate Research Participation program to encourage involvement of students with faculty researchers. Projects must be arranged in advance with faculty research directors.

**PHY 399. Special Problems in Physics. 1-4 Hours**

Special topical courses, laboratory, tutorial, or library work in areas of current interest. Students should consult the composite.

**PHY 403. Intermediate Mechanics II. 3 Hours**

Emphasis on solving physical problems; noninertial coordinate systems, rigid body motion, rotating systems, coupled systems, introductory fluid statics and dynamics, normal coordinates, and the descriptions of mechanics appropriate for the transition to wave mechanics.

Prerequisite(s): PHY 303.

**PHY 404. Physical Optics. 3 Hours**

The electromagnetic wave theory of light, propagation of waves, reflection, refraction, dispersion, polarization, dichroism, birefringence, superposition of waves, interference, diffraction, Fourier optics.

Prerequisite(s): MTH 219; (PHY 208 or PHY 232).

**PHY 408. Intermediate Electricity & Magnetism I. 3 Hours**

Electrostatics, Coulomb's law, Gauss's law, potential, dielectric materials, electrostatic energy, solutions to Laplace's and Poisson's equations, Biot-Savart law, Faraday induction law, magnetization, and Maxwell's equations. Prerequisite(s): MTH 219; (PHY 208 or PHY 232).

**PHY 409. Intermediate Electricity & Magnetism II. 3 Hours**

Further study of electric and magnetic fields with emphasis on solving problems; Maxwell's equations, propagation of electromagnetic waves, electromagnetic radiation. Prerequisite(s): PHY 408.

**PHY 411. Topics in Modern Physics. 3 Hours**

Elements of modern optics, solid state and other selected subjects. Consult chairperson for details. Prerequisite(s): PHY 390 or equivalent.

**PHY 420. Introduction to Solid State. 3 Hours**

Classification of solids, crystals and crystal structures, survey of lattice properties, free electron theory, band theory of solids, semi-conductors, and crystal imperfections. Prerequisite(s): MTH 219; (PHY 208 or 232); PHY 390.

**PHY 430. Advanced Lab I. 2 Hours**

No description available.

**PHY 431. Advanced Lab II. 2 Hours**

No description available.

**PHY 440. Quantum Mechanics II. 3 Hours**

Study of selected principles in quantum mechanics. Prerequisite(s): PHY 390.

**PHY 450. Senior Project. 3 Hours**

The senior project is a capstone experience for senior physics majors. It will consist of a research project of the student's choosing and will require both an oral and written report. The nature and scope of the project will be chosen in consultation with the student's advisor. Permission of the department chairperson is required. Senior physics majors only.

**PHY 460. Seminar. 1 Hour**

Presentation of papers by undergraduate students, faculty, and a guest lecturers on topics of concern to the modern physicist. Reviews of books and films appropriate to the group.

**PHY 477H. Honors Thesis. 3 Hours**

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

**PHY 478H. Honors Thesis. 3 Hours**

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

**PHY 480. Capstone Project & Presentation. 1 Hour**

Project and presentation in the scholarship, activity and/or practice related to the major. Students will present their work in a forum appropriate to the major.

**PHY 495. Research Participation II. 1-6 Hours**

Individual projects conducted as part of the physics Undergraduate Research Participation program to encourage involvement of students with faculty researchers. Projects must be arranged in advance with faculty research directors.

**PHY 499. Special Problems in Physics. 1-6 Hours**

Laboratory, tutorial, or library work in one of such selected topics as solid state physics, polymers, atomic and nuclear physics, modern optics, theoretical physics, surface physics, or general physics. Prerequisite(s): Permission of department chairperson.

## Political Science

Majors:

- Bachelor of Arts, Human Rights Studies (p. 249)
- Bachelor of Arts, Political Science (p. 250)

Minors:

- Human Rights Studies (p. 251)
- Political Science (p. 252)

The Department of Political Science offers the Bachelor of Arts with a major in Political Science and the Bachelor of Arts with a major in Human Rights Studies. Minors in political science and human rights studies are also offered.

- A major in political science requires 39 semester hours of political science courses.
- A major in human rights studies requires 45 to 57 semester hours of courses in the humanities and the social sciences.
- A minor in political science consists of 15 semester hours. Courses selected by students should strengthen academic or career objectives.
- A minor in human rights studies consists of 18 semester hours. Courses selected should strengthen academic or career objectives.

### Minors and Area Concentrations for Majors

A student majoring in political science can acquire teacher licensure through the dual-degree B.A. and B.S.E. program conducted in conjunction with the Department of Teacher Education in the School of Education and Health Sciences, or minor in any related discipline within the College of Arts and Sciences. The student must consult with the department administering the discipline for the particular requirements of a minor. Students majoring in political science may elect to develop a multidisciplinary concentration in an area of interest including:

- Prelaw
- International affairs
- Public administration and urban affairs
- Political journalism
- Others developed by the student in conjunction with his or her advisor

## Faculty

Grant W. Neeley, Interim Chairperson

Director of Human Rights Studies Program: Natalie Hudson

Director of Graduate Certificate in Nonprofit & Community Leadership:

Steve Neiheisel

Professors Emeriti: Ahern, Fogel, Inscho, Karns, Kerns, Lapitan, Nelson

Professor: Ingram

Associate Professors: Bilocerkowycz, Ensalaco, Ghere, Hudson, Miller, Neeley, Pautz, Pierce

Assistant Professors: Ambrosius, Puce, Watkins

Lecturers: Birdsong, Neiheisel, Talbott

## Bachelor of Arts with a major in Human Rights Studies STUDIES (hrs) Minimum 124 Hours

The Bachelor of Arts in Human Rights Studies is an integrated pre-professional degree firmly grounded in the traditional liberal arts. Students, faculty, and staff participating in the program enter into it guided by their fundamental commitment to respect and promote the dignity of each human person. The degree is intended to produce intellectually adept students who are capable of performing rigorous research and conducting high quality analysis of critical questions in the area of human rights studies. It is equally intended to produce thoughtful and transformational servant-leaders who will apply the knowledge and skills obtained in the program to contemporary human rights issues and situations both domestically and internationally. Through the integration of liberal and pre-professional education, the interdisciplinary program prepares distinctive graduates who intend to pursue advanced study and training in the field of human rights, or careers in human rights advocacy and humanitarian assistance. Those graduates will possess the values, knowledge and skills necessary for effective public service in:

- Government agencies
- Non-governmental organizations
- International aid agencies
- Non-profit groups in human rights or humanitarian assistance

Courses taken for the major may also count toward completion of the Common Academic Program and the Liberal Studies Curriculum.

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>		12
HST 103	West and the World	
REL 103	Introduction to Religious and Theological Studies	
PHL 103	Intro To Philosophy	
ENG 100	Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>		0-3
ENG 200	Writing Seminar II	
Oral Communication		3
CMM 100	Principles of Oral Communication	

Mathematics	3
Social Science	3
Arts	3
Natural Sciences <sup>4</sup>	7
Crossing Boundaries	variable credit
Faith Traditions	
Practical Ethical Action	
Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

### Liberal Studies Curriculum

Creative and Performing Arts (May include CAP Arts)	3
L2 Proficiency (Proficiency in a language other than English) <sup>1</sup>	0-11
Literature (May include CAP Components)	3
Mathematics, excluding MTH 205 (Satisfies CAP Mathematics)	3
Natural Sciences (Satisfies CAP Natural Sciences)	11
Social Sciences (Includes CAP Social Science)	12

### Major Requirements <sup>2</sup>

ASI 397	Capstone Seminar on Human Rights Advocacy (Satisfies CAP Major Capstone)	3
CMM 355	Rhetoric of Social Movements	3
HST 312	Age of Democratic Revolutions	3
PHL 371	Philosophy & Human Rights	3
POL 305	Introduction to Public Administration	3
POL 333	Politics of Human Rights	3
POL 334	Politics of Human Rights II	3
POL 406	International Law & Organization	3
REL 363	Faith & Justice	3
SOC 371	Sociology of Human Rights	3
Select one course from:		3
CMM 412	Statistical Methods in Communication	
HST 301	Research Methods Seminar	
POL 207	Political Analysis	
SOC 208	Social Research Methods	
Select one course from three different concentrations:		9
Anthropology		
ANT 360	Cultures of South Asia	
Criminal Justice Studies		
CJS 336	Comparative Criminal Justice	



Economics	
ECO 460	Economic Development & Growth
History	
HST 334	History of the Palestinian-Israeli Conflict
HST 337	History of Africa: 19th Century to the Present
HST 356	Comparative History of Women in the Third World
HST 361	U.S. Legal & Constitutional History II
HST 399	History of Blacks in the United States Since 1900
Philosophy	
PHL 314	Philosophy of Law
PHL 317	Ethics & Modern War
PHL 327	Philosophy of Peace
PHL 370	Political Philosophy
PHL 372	Values & Economics
Political Science	
POL 300	Political Issues <sup>3</sup>
POL 319	Twentieth-Century Political Thought
POL 331	Nationalism & Ethnopolitics (Satisfies CAP Social Science)
POL 361	Leadership in Nongovernmental Organizations
POL 450	Civil Liberties
POL 452	Political Violence
Religious Studies	
REL 358	Liberation Theology
REL 360	Christian Ethics
REL 366	The Holocaust: Theological & Religious Responses
Sociology	
SOC 326	Law & Society
SOC 328	Racial & Ethnic Relations
SOC 339	Social Inequality
SOC 345	Sociology of Extremism
SOC 368	Immigration & Immigrants
SOC 435	Economy & Society
Spanish	
SPN 380	Spanish & Ibero-American Cinema
SPN 480	Spanish & Ibero-American Cinema
<b>Experiential or Research Requirement</b>	
3-6	
Select one course (for a total of 3 semester hours):	
CMM 390	Independent Study
HST 496	Independent Study
PHL 492	Directed Research
POL 431	Independent Study & Research
POL 495	Internship
SOC 409	Senior Project
SOC 498	Independent Study
Or complete an Honors Thesis (for a total of 6 semester hours):	
CMM 477H & CMM 478H	Honors Thesis and Honors Thesis
HST 477H & HST 478H	Honors Thesis and Honors Thesis
PHL 477H & PHL 478H	Honors Thesis and Honors Thesis

POL 477H & POL 478H	Honors Thesis and Honors Thesis
REL 477H & REL 478H	Honors Thesis and Honors Thesis
SOC 477H & SOC 478H	Honors Thesis and Honors Thesis

**Breadth**

ASI 150	Introduction to the University Experience	1
Total Hours to total at least		124

- <sup>1</sup> Majors must demonstrate proficiency in a foreign language by passing a University proficiency examination or by completing a language course at the 141 level or higher with a minimum grade of C in one of the following languages:

- Arabic
- French
- German
- Italian
- Mandarin Chinese
- Russian
- Spanish

- <sup>2</sup> May include CAP Components.

- <sup>3</sup> This course can only be counted when taught as International Political Economy.

## Bachelor of Arts with a major in Political Science (pol) Minimum 124 Hours

**Common Academic Program (CAP)**

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>		12
HST 103	West and the World	
REL 103	Introduction to Religious and Theological Studies	
PHL 103	Intro To Philosophy	
ENG 100	Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>		0-3
ENG 200	Writing Seminar II	
Oral Communication		3
CMM 100	Principles of Oral Communication	
Mathematics		3
Social Science		3
Arts		3
Natural Sciences <sup>4</sup>		7
Crossing Boundaries		variable credit
Faith Traditions		
Practical Ethical Action		
Inquiry		
Integrative		
Advanced Study		variable credit
Philosophy and/or Religious Studies		
Historical Studies		

Diversity and Social Justice	3
Major Capstone	0-3

- <sup>1</sup> Completed with ASI 110 and ASI 120.
- <sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.
- <sup>3</sup> Completed with ENG 200H or ASI 120.
- <sup>4</sup> Must include two different disciplines and accompanying lab.

### Liberal Studies Curriculum

Creative and Performing Arts (May include CAP Arts)	3
L2 Proficiency (Proficiency in a language other than English)	0-11
Literature (May include CAP Components)	3
Mathematics, excluding MTH 205 (Satisfies CAP Mathematics)	3
Natural Sciences (Satisfies CAP Natural Science)	11
Social Sciences, excluding POL courses (Includes CAP Social Science)	12

### Major Requirements

POL 200	Introduction to Political Science	3
POL 201	The American Political System	3
POL 202	Introduction to Comparative Politics	3
or POL 214	Introduction to International Politics	
POL 207	Political Analysis	3
POL 316	American Political Thought	3
or POL 317	Development of Political Theory	
or POL 319	Twentieth-Century Political Thought	
POL 499	Political Science Capstone	3
Select seven POL courses (May include CAP Components) <sup>1, 2</sup>		21

### Breadth

ASI 150	Introduction to the University Experience	1
Total Hours to total at least		124

- <sup>1</sup> Including twenty-one semester hours at the 300/400 level.
- <sup>2</sup> Students earning the B.A. in Political Science may count no more than six semester hours earned on internships (POL 495) toward the fulfillment of the degree requirements in POL. Students may, however, take additional hours of internship credit (POL 495) and count them toward the necessary 124 hours needed for graduation.

## Minor in Human Rights Studies STUDIES (hrs)

The interdisciplinary minor in Human Rights Studies provides students an opportunity to address issues related to human rights from various disciplinary approaches. The universal nature of human rights issues may directly relate to a major, while in other cases this minor will provide an opportunity for broadening one's exposure to these important topics.

The Human Rights Studies minor requires 18 semester hours. It is recommended that the required course be taken in the sophomore year. Students should consult with the Director of Human Rights Studies to ensure that the courses selected from the elective pool display a significant degree of coherence. Courses taken from this minor may

be applied to other minors and to breadth and general education requirements.

### Human Rights Studies

POL 333	Politics of Human Rights	3
POL 334	Politics of Human Rights II	3
Select one course from:		3
PHL 371	Philosophy & Human Rights	
REL 363	Faith & Justice	
Select one course from:		3
ANT 325	Anthropology of Human Rights	
SOC 371	Sociology of Human Rights	
Select two courses from: <sup>1,2</sup>		6
ANT 325	Anthropology of Human Rights	
ANT 360	Cultures of South Asia	
ANT 368	Immigration & Immigrants	
CJS 336	Comparative Criminal Justice	
CMM 355	Rhetoric of Social Movements	
ECO 460	Economic Development & Growth	
HST 312	Age of Democratic Revolutions	
HST 334	History of the Palestinian-Israeli Conflict	
HST 337	History of Africa: 19th Century to the Present	
HST 356	Comparative History of Women in the Third World	
HST 361	U.S. Legal & Constitutional History II	
HST 399	History of Blacks in the United States Since 1900	
PHL 314	Philosophy of Law	
PHL 317	Ethics & Modern War	
PHL 327	Philosophy of Peace	
PHL 370	Political Philosophy	
PHL 371	Philosophy & Human Rights	
PHL 372	Values & Economics	
POL 300	Political Issues <sup>3</sup>	
POL 305	Introduction to Public Administration	
POL 319	Twentieth-Century Political Thought	
POL 331	Nationalism & Ethnopolitics	
POL 406	International Law & Organization	
POL 450	Civil Liberties	
POL 452	Political Violence	
REL 358	Liberation Theology	
REL 360	Christian Ethics	
REL 363	Faith & Justice	
REL 366	The Holocaust: Theological & Religious Responses	
SOC 326	Law & Society	
SOC 328	Racial & Ethnic Relations	
SOC 339	Social Inequality	
SOC 345	Sociology of Extremism	
SOC 368	Immigration & Immigrants	
SOC 371	Sociology of Human Rights	
SOC 435	Economy & Society	

- 1
At least one course must be from CMM, HST, PHL, or REL.
- 2
Select any course that has not been already used to fulfill other Human Rights Studies Minor requirements.
- 3
This course can only be counted when the topic is relevant to human rights.

Minor in Political Science (pol)

Political Science		
POL 201	The American Political System	3
Select four POL courses (300/400 level)		12
Total Hours		15
<ul style="list-style-type: none"> <li>Bachelor of Arts, Human Rights (p. 252)</li> <li>Bachelor of Arts, Political Science (p. 252)</li> </ul>		

Bachelor of Arts, human rights

First Year		
Fall	Hours Spring	Hours
ASI 150	1 REL 103 (CAP Humanities)	3
HST 103 (CAP Humanities)	3 ENG 100 (CAP Writing Seminar)	3
PHL 103 (CAP Humanities)	3 CMM 100 (CAP Communication )	3
MTH 114 or 207	3 SCI 190	3
POL 101	3 SCI 190L	1
Language 101	4 Language 141	4
	17	17
Second Year		
Fall	Hours Spring	Hours
ENG 200	3 SCI 230 or 240	3
SCI 210 or 220	3 HST 312 (or Adv HST)	3
SCI 210L or 220L	1 CMM 355	3
ANT 150	3 PHL 371 (or Adv REL or HST)	3
Arts	3 POL 305	3
Language 201 or contextual	3	
	16	15
Third Year		
Fall	Hours Spring	Hours
POL 333	3 ANT 360	3
POL 334	3 HST 334	3
REL 363 (or Adv REL or PHL)	3 Inquiry	3
SOC 371	3 POL 300	3
POL 207 or SOC 208	3 Diversity and Social Justice	3
	15	15
Fourth Year		
Fall	Hours Spring	Hours
POL 406	3 ASI 397	3
POL 495	3 General elective	3
Practical Ethical Action	3 Faith traditions	3
Integrative	3 General elective	3

General elective	3 Literature	3
	15	15

Total credit hours: 125

bachelor of arts, political science

First Year		
Fall	Hours Spring	Hours
ASI 150	1 POL 201	3
POL 200	3 MTH 114	3
CMM 100 (CAP Communication)	3 PHL 103 (CAP Humanities)	3
HST 103 (CAP Humanities)	3 ENG 100 (CAP Writing Seminar)	3
REL 103 (CAP Humanities)	3 Language 141	4
Language 101	4	
	17	16
Second Year		
Fall	Hours Spring	Hours
SCI 190	3 POL elective	3
SCI 190L	1 Upper level SOC, PSY, or ECO	3
Language contextual course	3 SCI 210 or 220	3
POL 202 or 214	3 SCI 210L or 220L	1
POL 207	3 ENG 200	3
PSY 101, SOC 101, or SOC 204	3 SSC 200	3
	16	16
Third Year		
Fall	Hours Spring	Hours
POL 316, 317, or 319	3 Social Science (non-POL)	3
POL elective	3 POL elective	3
Adv REL or PHL	3 Inquiry	3
Diversity or Social Justice	3 Adv REL or PHL	3
SCI 230 or 240	3 Practical Ethical Action	3
	15	15
Fourth Year		
Fall	Hours Spring	Hours
POL 499	3 POL elective	3
POL elective	3 POL elective	3
Integrative	3 Adv HST	3
Social Science	3 Arts	3
Literature	3 Faith Tradition	3
POL elective	3	
	18	15
Total credit hours: 128		

Courses

**POL 101. Global Politics. 3 Hours**  
Examination of major problems and trends in world politics such as ethnic and religious conflict, economic integration and inequality, democratization and security issues, as well as the role of regional and international organizations.

**POL 101H. Global Politics. 3 Hours**

Examination of major problems and trends in world politics such as ethnic and religious conflict, economic integration and inequality, democratization and security issues, as well as the role of regional and international organizations.

**POL 200. Introduction to Political Science. 3 Hours**

Study of the dominant theoretical approaches, central questions and concepts, and history of political science. Political Science majors only.

**POL 201. The American Political System. 3 Hours**

Study of the American political system, its attitudinal and constitutional base, its structure and processes.

**POL 201H. The American Political System. 3 Hours**

Study of the American political system, its attitudinal and constitutional base, its structure and processes.

**POL 202. Introduction to Comparative Politics. 3 Hours**

Analysis of major concepts and approaches in the study of comparative government and politics.

**POL 202H. Introduction to Comparative Politics. 3 Hours**

Analysis of major concepts and approaches in the study of comparative government and politics.

**POL 207. Political Analysis. 3 Hours**

Introduction to the basic concepts and processes of research in political science.

**POL 214. Introduction to International Politics. 3 Hours**

Analysis of the dynamic forces of conflict and cooperation in world politics.

**POL 300. Political Issues. 3 Hours**

Introductory examination of contemporary political issues selected by the instructor, such topics as welfare, political morality, political campaigns, institutional reform, and political economy.

**POL 300H. Political Issues. 3 Hours**

Introductory examination of contemporary political issues selected by the instructor, such topics as welfare, political morality, political campaigns, institutional reform, and political economy.

**POL 301. The American Judicial Process. 3 Hours**

Study of the judicial process as part of the political system. Focus on the participants (police, lawyers, judges, interest groups, litigants, jurors) and the process (criminal, civil, and appellate proceedings).

**POL 303. State & Local Government. 3 Hours**

Comparative study of the political institutions, processes, and systems of the fifty states and their effect on the content and administration of selected public policies, programs, and services.

**POL 305. Introduction to Public Administration. 3 Hours**

Basic principles of organization and management in executive departments of government at all levels; questions of planning, leadership, and control.

**POL 306. Public Policy Analysis. 3 Hours**

Introduction to public policy-making systems and the methodology of policy analysis; theories of policy formulation, the policy-making process, means for measuring policy effectiveness, analysis of proposals for policy change.

**POL 307. The Politics of Bureaucracy & Regulation. 3 Hours**

Examination of the nature and meaning of bureaucracy in contemporary American society, its relationship to the private sector, and the devices for its evaluation and control.

**POL 308. Morality Policy. 3 Hours**

Introduction to the morality-based public policy debate with comparison of morality policy (e.g. abortion, drugs, gay rights, pornography) and traditional forms of public policy; study of the moral basis underlying current political topics and debate.

**POL 310. Political Parties, Campaigns & Elections. 3 Hours**

Analysis of the history, nature, and function of political parties and their role in the political system in both a domestic and comparative context.

**POL 311. Public Opinion & Political Behavior. 3 Hours**

The formation, maintenance, change, and impact of public opinion on the American political system; the role of theory and analysis of data in understanding public and political behavior.

**POL 313. The American Presidency. 3 Hours**

Study of the American presidency, the development of presidential powers, and its leadership role in the political system.

**POL 314. Interest Group Politics. 3 Hours**

Exploration of the role of interest groups in the American political system through an examination of their internal organization and their roles in the electoral and policy making processes at the national, state and local levels. Prerequisite(s): POL 201.

**POL 316. American Political Thought. 3 Hours**

An exploration and critical investigation of selected actors, thinkers, texts, ideas and movements in American political thought and theory from the colonial period to the present. Topics may include the founding, the age of Jackson, the Civil War, Progressivism, Women's Suffrage, the New Deal, the Cold War, the Civil Rights Movement, the 1960s, and others.

**POL 317. Development of Political Theory. 3 Hours**

Analysis of selected theorists and political doctrines forming the tradition of Western thought on politics. Theorists including Plato, Aristotle, the Stoics, Augustine, Aquinas, Machiavelli, Hobbes, Locke, Rousseau, Mill, Marx, Spencer, Lenin, Gasset, and Camus presented in their historical and socio-political contexts.

**POL 318. Public Integrity & Political Leadership. 3 Hours**

Analysis of contemporary leadership issues related to integrity and values in political office-holding, public service, and global governance contexts. Prerequisite(s): CMM 201 or (POL 201 or POL 202 or POL 214) or permission of instructor.

**POL 319. Twentieth-Century Political Thought. 3 Hours**

Analysis of selected political theorists, concepts, and movements from the late nineteenth century to the present. Thinkers and concepts may include Marx, Nietzsche, Sartre, Camus, Freud, Arendt, Strauss, the Frankfurt School, Fanon, Foucault, Rawls, Rorty, existentialism, feminism, colonialism, post-modernity, liberalism, neo-conservatism among others.

**POL 320. Comparative Politics: Western Europe. 3 Hours**

Analysis of governmental institutions and political processes of Western Europe.

**POL 321. Comparative Politics: Russia & the New States. 3 Hours**

Analysis of governmental institutions and political processes of Russia and the New States.

**POL 321H. Comparative Politics: Russia & the New States. 3 Hours**

Analysis of governmental institutions and political processes of Russia and the New States.

**POL 323. Comparative Politics: Latin America. 3 Hours**

Analysis of governmental institutions and political processes of Latin America.



**POL 331. Nationalism & Ethnopolitics. 3 Hours**

An analysis of the politics of nationalism and ethnicity and their impact on social justice. Diverse case studies (US, Russia, Northern Ireland, Israeli-Palestinian) and institutions (European Community, United Nations) will be explored.

**POL 333. Politics of Human Rights. 3 Hours**

Examines the evolution of international human rights norms and the creation of the institutions for the protection and promotion of human rights, and case material relating to each category of internationally recognized human rights.

**POL 334. Politics of Human Rights II. 3 Hours**

This research seminar examines select topics related to the protection and promotion of human rights. This course is required for all Human Rights Studies majors. The research seminar adopts a case-study approach that enables students to analyze the complex social, economic, cultural, and political factors that impede the full realization of internationally recognized human rights, and to critically evaluate the effectiveness of the advocacy strategies used by inter-governmental human rights bodies and non-governmental human rights organizations. Thus, this seminar is designed to enable students to connect human rights theory and practice. Part I (Overview) provides a more in-depth examination of the material covered in POL 333 (the Politics of Human Rights I). Part II (Case Studies) examines critical contemporary issues and covers the full range of civil, political, economic, social, and cultural rights. Students will collaborate on team research projects and produce a final Human Rights Report containing an analysis of a specific situation of the violation of human rights, findings of fact, and recommendations aimed at rectifying the situation. Students will present and defend their team reports and present in class at the end of the semester. Prerequisite(s): POL 333.

**POL 334H. Politics of Human Rights II. 3 Hours**

This research seminar examines select topics related to the protection and promotion of human rights. This course is required for all Human Rights Studies majors. The research seminar adopts a case-study approach that enables students to analyze the complex social, economic, cultural, and political factors that impede the full realization of internationally recognized human rights, and to critically evaluate the effectiveness of the advocacy strategies used by inter-governmental human rights bodies and non-governmental human rights organizations. Thus, this seminar is designed to enable students to connect human rights theory and practice. Part I (Overview) provides a more in-depth examination of the material covered in POL 333 (the Politics of Human Rights I). Part II (Case Studies) examines critical contemporary issues and covers the full range of civil, political, economic, social, and cultural rights. Students will collaborate on team research projects and produce a final Human Rights Report containing an analysis of a specific situation of the violation of human rights, findings of fact, and recommendations aimed at rectifying the situation. Students will present and defend their team reports and present in class at the end of the semester. Prerequisite(s): POL 333.

**POL 335. United States National Security Policy. 3 Hours**

Analysis of various political, economic, and military issues and problems relating to U.S. national security.

**POL 340. Gender & International Relations. 3 Hours**

An examination of feminist approaches to the study of international politics and the influence of gender roles on notions of international peace, security, power, development, democracy, human rights, transnational advocacy, and conflict resolution. Prerequisite(s): (POL 101 or POL 214) or permission of instructor.

**POL 350. Legislative Politics. 3 Hours**

Study of the U.S. Congress, its organization and procedures, and its powers and influence in the political system.

**POL 360. Urban Politics & Policy. 3 Hours**

Study of the nature of urban political systems in the U.S. with emphasis on explanation of differences in their policy responses.

**POL 361. Leadership in Nongovernmental Organizations. 3 Hours**

Examination of management skills required of professionals in various types of nongovernmental organizations (NGOs) and how leaders integrate agency values and management processes to promote rights-related missions. HRS and POL majors or minors only or permission of the department chairperson.

**POL 365. Disaster Policy & Administration. 3 Hours**

Exploration of policy approaches and administrative response strategies related to various phases of disasters and security crises in the U.S. and international settings with attention to human rights issues. Prerequisite(s): POL 201 or permission of instructor.

**POL 371. Environmental Policy. 3 Hours**

Examination of environmental public policymaking and implementation in the U.S. and in the international arena. Analysis of domestic and international government responses to specific environmental issues.

**POL 404. United States - Latin American Relations. 3 Hours**

This course examines the foreign relations of the United States with other countries of the Western hemisphere. Political, economic and security issues are examined from both theoretical and historical perspectives. Prerequisite(s): (POL 210 or POL 214) or permission of instructor.

**POL 406. International Law & Organization. 3 Hours**

Study of rules governing the community of nations; their nature, sources, and development; the international agencies responsible for their development, interpretation, and administration. Prerequisite(s): POL 214 or permission of instructor.

**POL 406H. Internatnl Law&Organ. 3 Hours**

Study of rules governing the community of nations; their nature, sources, and development; the international agencies responsible for their development, interpretation, and administration. Prerequisite(s): POL 214 or permission of instructor.

**POL 408. American Foreign Policy. 3 Hours**

Critical study of the American foreign policy process and evaluation of the sources of American foreign policy. Prerequisite(s): (POL 201, POL 214) or permission of instructor.

**POL 409. Russian Foreign Policy. 3 Hours**

Analysis of the internal and external factors shaping the foreign policies of Russia and the independent republics.

**POL 410. Comparative Foreign Policy. 3 Hours**

Comparative analysis of the foreign policies of major states with emphasis on the process of policy development and on the national and international determinants of policy behaviors. Prerequisite(s): (POL 202 or POL 217) or permission of instructor.

**POL 411. Constitutional Law. 3 Hours**

Analysis of the role of the U.S. Supreme Court in its interpretation of the Constitution. Emphasis on the various methods of judicial interpretation as they affect such provisions as the commerce clause, the taxing and spending powers, due process, the dimensions of presidential and congressional authority, and the doctrine of judicial review. Prerequisite(s): POL 301 or permission of instructor.

**POL 412. Comparative Law. 3 Hours**

Explores how foreign judicial systems protect and promote civil and political rights through different constitutional designs. Prerequisite(s): POL 301.

**POL 413. The Politics of Bureaucracy & Regulation. 3 Hours**

Examination of the nature and meaning of bureaucracy in contemporary American society and the devices for its evaluation and control.

**POL 421. Seminar in Political Science. 3 Hours**

Seminar on current problems and issues in political science. May be taken more than once when content changes. Prerequisite(s): Political Science major; completed POL core courses.

**POL 426. Leadership in Building Communities. 3 Hours**

Investigation of the processes by which urban neighborhoods develop themselves from the inside out. Students cultivate their own interdisciplinary appreciation of urban communities through extensive interaction with one neighborhood's visioning process. Topics include asset-based community development, social capital, citizenship, adaptive leadership, and community building strategies and tools.

**POL 426H. Leadership in Building Communities. 3 Hours**

Investigation of the processes by which urban neighborhoods develop themselves from the inside out. Students cultivate their own interdisciplinary appreciation of urban communities through extensive interaction with one neighborhood's visioning process. Topics include asset-based community development, social capital, citizenship, adaptive leadership, and community building strategies and tools.

**POL 431. Independent Study & Research. 1-3 Hours**

Individual reading and research on selected topics under faculty direction. Recommended for seniors only. Prerequisite(s): Permission of instructor or department chairperson.

**POL 450. Civil Liberties. 3 Hours**

Analytical examination of civil liberties in the U.S. with emphasis on the Supreme Court as arbiter in the endless conflict between the demand for individual liberty and the needs of constitutional authority. Prerequisite(s): (POL 301 or POL 411) or permission of instructor.

**POL 452. Political Violence. 3 Hours**

Consideration of theoretical approaches to understanding violent change in political institutions; the continuum between violence and nonviolence; revolution, revolt, campus dissent, and political assassination. Prerequisite(s): (POL 202 or POL 333) or permission of instructor.

**POL 477H. Honors Thesis. 3 Hours**

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

**POL 478H. Honors Thesis. 3 Hours**

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

**POL 479. Selected Topics in Public Policy. 3 Hours**

Intensive examination of policy process, outcomes, and impact in an area or areas of American public policy selected by the instructor; such topics as transportation, education, welfare, national defense, urban and community development, civil rights, and science and technology. May be repeated once when topic changes.

**POL 495. Internship. 1-9 Hours**

Supervised experience in government agencies and programs. Prelaw students are assigned to law firms and judicial chambers. Prerequisite(s): Permission of supervising professor.

**POL 497. Service Learning Experience. 1 Hour**

Supervised community research or service experience that complements a specific upper division course in Political Science. Repeatable up to three semester hours. No more than three semester hours of Social Science 497 credits can count toward graduation. Prerequisite(s): Permission of instructor. Corequisite(s): A 300-400 Political Science course.

**POL 499. Political Science Capstone. 3 Hours**

Project and presentation in the scholarship, activity and/or practice related to the major. Students will present their work in a forum appropriate to the major.

## Prelaw

Minor:

- Prelaw (p. 256)

The Prelaw Program, designed to serve students from all areas of the University, provides undergraduates and alumni interested in law school with opportunities to acquire the knowledge and skills necessary for a successful legal career through both the Prelaw Studies minor as well as through an extensive variety of preprofessional services and resources designed to help students plan an intentionally developmental undergraduate academic path. While students interested in careers in law should choose undergraduate majors to match their interests and abilities, they should also contact and stay engaged with the Prelaw Program as early in their undergraduate careers as possible so they can receive effective prelaw advice.

Students can take advantage of one or both paths through the Prelaw Program. The interdisciplinary Prelaw Studies minor enhances the preparation of students planning to seek admission to law school by promoting both the development of skills considered essential by both law schools and legal professionals -- critical reasoning, writing and analytical skills -- and professional skills. The Prelaw Program, i.e., the Director together with fifteen additional prelaw faculty advisors, provides students with curriculum guidance for developing the skills set needed for success in their future legal education and career, with law school admissions fairs, with aid in preparing for the Law School Admission Test (LSAT), including simulated tests and prep workshops, and with individual assistance in law school selection and law school applications. Moreover, the Program has a legal internship program and a Mock Trial team, both of which offer students valuable experiential learning, an undergraduate chapter of Phi Alpha Delta, a Prelaw Club and other opportunities for development based on the individual student's talents, interests, and goals.

For further information concerning the Prelaw Program at the University of Dayton, students should contact the Prelaw Program in Alumni Hall, Room 117; phone (937) 229-4229.

## Prelaw Committee

Laura H. Hume (History), Director  
 Alakkad (Engineering), Becker (Sociology), Bednarek (History),  
 Berry (Psychology), Carlson (International Studies), Hoepf (Business Administration), Hudson (Human Rights Studies), Inglis (Philosophy),  
 Ingram (Political Science), Jipson (Criminal Justice Studies), Kimbrough (English), Lau (Management), Parsons (Communication), Peters (Communication), Pierce (Political Science), Russo (Education), Shafer (College of Arts and Sciences)

## Minor in Prelaw (PLW)

PreLaw		20-22
Core Courses		
PLW 200	Legal Careers & Professional Development	1
PHL 302	Symbolic Logic	3
POL 301	The American Judicial Process	3
Additional Essential Skills Courses (13-15 hours)		
Writing Skills - select one course from:		3
ENG 316	Elements of Style	
ENG 370	Report & Proposal Writing	
ENG 371	Technical Communication	
ENG 372	Business Communication	
ENG 474	Argument and Style	
Quantitative Analysis Skills - select one from: <sup>1</sup>		3
ACC 207	Introduction to Financial Accounting	
ACC 208	Introduction to Managerial Accounting	
CMM 412	Statistical Methods in Communication	
DSC 210	Statistics for Business I	
DSC 211	Statistics for Business II	
ECO 203	Principles of Microeconomics	
MTH 148	Introductory Calculus I	
MTH 207	Introduction to Statistics	
PSY 216	Elementary Statistics	
SOC 308	Data Analysis	
Written Research Skills - select one from: <sup>2</sup>		3
CJS 447	Senior Seminar in Criminal Justice Studies	
ENG 490	Research Seminar-Literature	
HST 301	Research Methods Seminar	
HST 498	History Capstone Seminar	
INS 499	Senior Capstone Seminar	
PHL 492	Directed Research	
Legal Vocabulary and Concepts - select one from:		3
CJS 305	Criminal Law	
CJS 315	Criminal Procedure	
MGT 201	Legal Environment of Business	
PHL 314	Philosophy of Law	
POL 411	Constitutional Law	
SOC 326	Law & Society	
Experiential Learning - complete 1-3 hours from the following: <sup>3</sup>		1-3
CJS 495	Internship in Criminal Justice I	
POL 495	Internship	
PLW 301	Mock Trial I <sup>4</sup>	

PLW 302	Mock Trial II <sup>4</sup>
PLW 495	Legal Internship

- 1 Other MTH courses may also apply with permission of program coordinator.
- 2 May be completed with an Honors Thesis course in any academic department or with permission of the program coordinator any other course not listed that both teaches research methods and requires the student to research and write a substantial paper (12-page minimum length) will also fulfill this requirement.
- 3 Other internships may also apply with permission of program coordinator.
- 4 Must complete sequence in consecutive semesters over the course of one academic year.

## Courses

### PLW 200. Legal Careers & Professional Development. 1 Hour

Introduction to careers in various legal practice fields and the different employment options students will have with a law degree. Emphasis is on exploring personal motives and strengths as students consider preparing for law school and a legal career. Includes academic planning and professional behaviors development.

### PLW 301. Mock Trial I. 1 Hour

Practice and performance of attorney and witness roles for Mock Trial National Competition case. Repeatable up to four semester hours.

### PLW 302. Mock Trial II. 1 Hour

Practice and performance of attorney and witness roles for Mock Trial Regional and National competitions. Repeatable up to four semester hours. Prerequisite(s): PLW 301; invitation by mock trial coaches.

### PLW 495. Legal Internship. 1-3 Hours

Supervised legal work experience with an approved law or law-related office, organization or program.

## Premedicine/Predentistry

Majors:

- Bachelor of Science, Predentistry (p. 257)
- Bachelor of Science, Premedicine (p. 258)

Minor:

- Medical Humanities (p. 259)

The Bachelor of Science with a major in pre-medicine (MED) or predentistry (DEN) is an interdisciplinary curriculum of study. It is distinctively designed to provide a science-based, diverse education as a preparation for admission to any of the health professional schools including medical, dental, physician assistant, optometry, pharmacy, veterinary, and chiropractic. Courses in biology, chemistry, mathematics, and physics comprise the science core of the major. A substantial complement of humanities and social sciences courses are also required. Within this framework the curriculum is flexible and can be tailored to suit personal interests. During the first two years, students enroll in courses appropriate for entry into professional schools while they also fulfill basic University requirements.

Admission to professional schools depends upon many factors in addition to the curriculum or major. Academic standing, performance on standardized examinations, practical experience relevant to the profession of interest, and adherence to application procedures are all

important. The Premedical Programs Office addresses these factors through a comprehensive approach to pre-health care education.

Along with the administration of the DEN and MED majors, the Premedical Programs office acts as the focal point for all matters related to admission to any allied health care professional school. It is an information clearing house, functions as a liaison with professional schools, and coordinates the application process. The Premedical Programs Office also coordinates a number of internships, health related student organizations and community based clinical opportunities for students. Students in any major planning to apply to professional schools are urged to maintain a close relationship with this office.

The University automatically enrolls entering premedical or pre-dental majors into special orientation classes, and identifies them to the Premedical Programs office. Members of the Premedical/Pre-dental Advisory Committee advise these students. However, advising services are available to all pre-professional students regardless of their major. Students in other majors may elect to have committee members serve as their secondary advisors; such students should identify themselves to the Premedical Programs office.

In addition to providing counseling, Premedical Programs offers a seminar series, joint programs with medical schools, grants for health care related experiences, and scholarships. Since admission to professional schools is highly selective, the program monitors the academic progress of MED/DEN majors, and provides feedback at the end of the first and second year. Transfers to other majors, particularly to science majors, can usually be accommodated during the first two years without affecting normal progress towards graduation.

### Premedical/Predental Advisory Committee

Kathleen C. Scheltens, Director  
 Julie Simon (Mathematics), Assistant Director  
 Ahouija (Physics), Burky (Biology), Craver (Physics), Hansen (Biology), Johnson (Chemistry), Kango-Singh (Biology), Kearns (Biology), Krane (Biology), Lopper (Chemistry), Mammana (Chemistry), Nickell (Biology), Nielsen (Biology), Smith (Physics), Singh (Biology), S. Swavey (Chemistry), T. Williams (Biology), S. Wright (Biology)

## Bachelor of Science in Predentistry (den) Minimum 120 Hours

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
HST 103 West and the World	
REL 103 Introduction to Religious and Theological Studies	
PHL 103 Intro To Philosophy	
ENG 100 Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>	0-3
ENG 200 Writing Seminar II	
Oral Communication	3
CMM 100 Principles of Oral Communication	
Mathematics	3
Social Science	3
Arts	3
Natural Sciences <sup>4</sup>	7

Crossing Boundaries	variable credit
Faith Traditions	
Practical Ethical Action	
Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

- 1 Completed with ASI 110 and ASI 120.
- 2 Or ENG 100A and ENG 100B, or ENG 200H, by placement.
- 3 Completed with ENG 200H or ASI 120.
- 4 Must include two different disciplines and accompanying lab.

### Major Requirements 63

Satisfies CAP Mathematics and CAP Natural Science		
BIO 151 & 151L	Concepts of Biology I: Cell & Molecular Biology and Concepts of Biology Laboratory: Cell & Molecular Biology	4
BIO 152 & 152L	Concepts of Biology II: Evolution & Ecology and Concepts of Biology Laboratory II: Evolution & Ecology	4
CHM 123 & 123L	General Chemistry and General Chemistry Laboratory	4
CHM 124 & 124L	General Chemistry and General Chemistry Laboratory	4
CHM 313 & 313L	Organic Chemistry and Organic Chemistry Laboratory	4
CHM 314 & 314L	Organic Chemistry and Organic Chemistry Laboratory	4
CHM 420	Biochemistry	3
CHM 462L	Biochemistry Laboratory	1
MTH 148 & MTH 149	Introductory Calculus I and Introductory Calculus II	6
or MTH 168 & MTH 169	Analytic Geometry & Calculus I and Analytic Geometry & Calculus II	
PHY 201 & PHY 202	General Physics and General Physics <sup>2</sup>	6
or PHY 206 & PHY 207 & PHY 208	General Physics I - Mechanics and General Physics II - Electricity & Magnetism and General Physics III - Mechanics of Waves	
PHY 201L	General Physics Laboratory <sup>2</sup>	1
PHY 202L	General Physics Laboratory	1
MED 480	Pre-Medicine Capstone (Satisfies CAP Major Capstone)	1
Select one course from:		3
CPS 111	Introduction to Personal Computers	
MTH 207	Introduction to Statistics	
MTH 367	Statistical Methods I	



Select five science courses, two with accompanying laboratories, from: 17

BIO 309 & 309L	Comparative Anatomy of the Vertebrates and Comparative Anatomy Laboratory
BIO 312 & 312L	General Genetics and Genetics Laboratory
BIO 403 & 403L	Physiology I and Physiology Laboratory I
BIO 404	Physiology II
BIO 411 & 411L	General Microbiology and General Microbiology Laboratory
BIO 415	Neurobiology
BIO 427	Immunology
BIO 439	Analysis & Interpretation of Biological Data
BIO 440 & 440L	Cell Biology and Cell Biology Laboratory
BIO 442 & 442L	Developmental Biology and Developmental Biology Laboratory
BIO 445	Evolution & Development
BIO 460	Introduction to Bioinformatics
BIO 462	Molecular Biology
BIO 466	Biology of Infectious Disease
BIO 470	Cancer Biology
BIO 475 & 475L	Human Anatomy and Human Anatomy Laboratory
BIO 480 & 480L	Principles of Microscopy and Principles of Microscopy Laboratory
CHM 201 & 201L	Quantitative Analysis and Quantitative Analysis Laboratory
CHM 302	Physical Chemistry
CHM 427	Medicinal Chemistry
CHM 451	General Biochemistry I
CHM 452	General Biochemistry II

#### Breadth

ASI 150	Introduction to the University Experience	1
Electives <sup>4, 5</sup>		10
ENG Elective <sup>6</sup>		3
Select one course from: (Satisfies CAP Practical Ethical Action and Adv Studies in PHL or REL)		3
PHL 312	Ethics	
PHL 315	Medical Ethics	
REL 365	Christian Ethics & the Environment	
REL 367	Christian Ethics & Health Care Issues	
Social and Behavioral Sciences (Includes CAP Social Science)		12
Total Hours to total at least		120

<sup>1</sup> Well qualified students are advised to take MTH 168-MTH 169.

<sup>2</sup> Well qualified students are strongly advised to take PHY 206-PHY 207-PHY 208 lecture sequence with PHY 201L and PHY 202L.

<sup>3</sup> The elective courses must be directly related to the primary field of interest.

<sup>4</sup> Only general elective courses can be taken under Grading Option Two.

<sup>5</sup> Courses in graphic design, studio art, or performing arts are recommended.

<sup>6</sup> Select ENG elective from among ENG 203, ENG 204, ENG 205, ENG 272, ENG 316, or any 300-level Common Academic Program ENG elective. ENG 373, when content is Medical Writing, is recommended.

## Bachelor of Science in Premedicine (med) Minimum 120 Hours

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
HST 103	West and the World
REL 103	Introduction to Religious and Theological Studies
PHL 103	Intro To Philosophy
ENG 100	Writing Seminar I <sup>2</sup>
Second-Year Writing Seminar <sup>3</sup>	0-3
ENG 200	Writing Seminar II
Oral Communication	3
CMM 100	Principles of Oral Communication
Mathematics	3
Social Science	3
Arts	3
Natural Sciences <sup>4</sup>	7
Crossing Boundaries	variable credit
Faith Traditions	
Practical Ethical Action	
Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

### Major Requirements 63

Satisfies CAP Mathematics and Natural Science		
BIO 151 & 151L	Concepts of Biology I: Cell & Molecular Biology and Concepts of Biology Laboratory: Cell & Molecular Biology	4
BIO 152 & 152L	Concepts of Biology II: Evolution & Ecology and Concepts of Biology Laboratory II: Evolution & Ecology	4
CHM 123 & 123L	General Chemistry and General Chemistry Laboratory	4

CHM 124 & 124L	General Chemistry and General Chemistry Laboratory	4
CHM 313 & 313L	Organic Chemistry and Organic Chemistry Laboratory	4
CHM 314 & 314L	Organic Chemistry and Organic Chemistry Laboratory	4
CHM 420	Biochemistry	3
CHM 462L	Biochemistry Laboratory	1
MTH 148 & MTH 149	Introductory Calculus I and Introductory Calculus II	6
or MTH 168 & MTH 169	Analytic Geometry & Calculus I and Analytic Geometry & Calculus II	
PHY 201 & PHY 202	General Physics and General Physics <sup>2</sup>	6
or PHY 206 & PHY 207 & PHY 208	General Physics I - Mechanics and General Physics II - Electricity & Magnetism and General Physics III - Mechanics of Waves	
PHY 201L	General Physics Laboratory <sup>2</sup>	1
PHY 202L	General Physics Laboratory	1
MED 480	Pre-Medicine Capstone (Satisfies CAP Major Capstone)	1
Select one course from:		3
CPS 111	Introduction to Personal Computers	
MTH 207	Introduction to Statistics	
MTH 367	Statistical Methods I	
Select five science courses, two with accompanying laboratories, from: <sup>3</sup>		17
BIO 309 & 309L	Comparative Anatomy of the Vertebrates and Comparative Anatomy Laboratory	
BIO 312 & 312L	General Genetics and Genetics Laboratory	
BIO 403 & 403L	Physiology I and Physiology Laboratory I	
BIO 404	Physiology II	
BIO 411 & 411L	General Microbiology and General Microbiology Laboratory	
BIO 415	Neurobiology	
BIO 427	Immunology	
BIO 439	Analysis & Interpretation of Biological Data	
BIO 440 & 440L	Cell Biology and Cell Biology Laboratory	
BIO 442 & 442L	Developmental Biology and Developmental Biology Laboratory	
BIO 445	Evolution & Development	
BIO 460	Introduction to Bioinformatics	
BIO 462	Molecular Biology	
BIO 466	Biology of Infectious Disease	
BIO 470	Cancer Biology	
BIO 475 & 475L	Human Anatomy and Human Anatomy Laboratory	
BIO 480 & 480L	Principles of Microscopy and Principles of Microscopy Laboratory	
CHM 201 & 201L	Quantitative Analysis and Quantitative Analysis Laboratory	

CHM 302	Physical Chemistry	
CHM 427	Medicinal Chemistry	
CHM 451	General Biochemistry I	
CHM 452	General Biochemistry II	

**Breadth**

ASI 150	Introduction to the University Experience	1
Electives <sup>4, 5</sup>		10
ENG Elective <sup>6</sup>		3
Select one course from: (Satisfies CAP Practical Ethical Action and Adv Studies in PHL or REL)		3
PHL 312	Ethics	
PHL 315	Medical Ethics	
REL 365	Christian Ethics & the Environment	
REL 367	Christian Ethics & Health Care Issues	
Social and Behavioral Sciences (Includes CAP Social Science)		12
Total Hours to total at least		120

- 1 Well qualified students are advised to take MTH 168-MTH 169.
- 2 Well qualified students are strongly advised to take PHY 206-PHY 207-PHY 208 lecture sequence with PHY 201L and PHY 202L.
- 3 The elective courses must be directly related to the primary field of interest.
- 4 Only general elective courses can be taken under Grading Option Two.
- 5 Select ENG elective from among ENG 203, ENG 204, ENG 205, ENG 272, ENG 316, or any 300-level Common Academic Program ENG elective. ENG 373, when content is Medical Writing, is recommended.

**MINOR in Medical Humanities (mhm)**

Select 5 courses from: 15

ANT 336	Epidemics, Power & the Human Condition	
CMM 411	Health Communication	
ENG 373	Medical Writing	
PHL 315	Medical Ethics	
PSY 366	Health Psychology	
REL 367	Christian Ethics & Health Care Issues	
SWK 330	Perspectives on Aging	
SWK 331	Death, Dying and Suicide	

- 1 Additional courses may be approved by the Program Director.

- Bachelor of Science, Pre dentistry (p. 260)
- Bachelor of Science, Pre medicine (p. 259)

**Bachelor Of Science, PreDENTISTRY****First Year**

Fall	Hours Spring	Hours
ASI 150	1 BIO 152 & 152L	4
BIO 151 & 151L (Satisfies CAP Natural Science)	4 CHM 124 & 124L	4

CHM 123 & 123L (Satisfies CAP Natural Science)	4 MTH 149	3
MTH 148 (Satisfies CAP Mathematics)	3 REL 103, PHL 103, or HST 103 (Satisfies CAP Humanities)	3
ENG 100 (Satisfies CAP Writing Seminar)	3 REL 103, PHL 103, or HST 103 (Satisfies CAP Humanities)	3
REL 103, PHL 103, or HST 103 (Satisfies CAP Humanities)	3	

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17

**Second Year**

Fall	Hours Spring	Hours
CHM 313 & 313L	4 CHM 314 & 314L	4
PHY 201 & 201L	4 PHY 202 & 202L	4
ENG 200	3 Arts	3
CMM 100 (Satisfies CAP Communication)	3 PHL 312, 315, REL 365, or REL 367 (Satisfies CAP Practical Ethical Action)	3
Social Science (Satisfies CAP Social Science)	3 Social Science	3

17

17

**Third Year**

Fall	Hours Spring	Hours
CHM 420	3 Science elective w/lab	4
CHM 462L	1 Science elective	3
MTH 207, 367, or CPS 111	3 Adv REL or PHL (Satisfies CAP Faith Traditions)	3
Science elective	3 Integrative	3
Inquiry	3 Social Science	3
General Elective	2	

15

16

**Fourth Year**

Fall	Hours Spring	Hours
Science elective w/lab	4 MED 480	1
Diversity and Social Justice	3 Science elective	3
Adv HST	3 English elective	3
Social Science	3 General elective (optional)	3
General elective (optional)	3 General elective (optional)	3
	General elective (optional)	3

16

16

Total credit hours: 132

**Bachelor of Science, PreMEDICAL****First Year**

Fall	Hours Spring	Hours
ASI 150	1 BIO 152 & 152L	4

BIO 151 & 151L (satisfies CAP Natural Science)	4 CHM 124 & 124L	4
CHM 123 & 123L (satisfies CAP Natural Science)	4 MTH 149	3
MTH 148 (satisfies CAP Mathematics)	3 REL 103, PHL 103, or HST 103 (satisfies CAP Humanities)	3
ENG 100 (satisfies CAP Writing Seminar)	3 REL 103, PHL 103, or HST 103 (satisfies CAP Humanities)	3

REL 103, PHL 103, or  
HST 103 (satisfies CAP  
Humanities)

3

**Second Year**

Fall	Hours Spring	Hours
CHM 313 & 313L	4 CHM 314 & 314L	4
PHY 201 & 201L	4 PHY 202 & 202L	4
ENG 200	3 Arts	3
CMM 100 (satisfies CAP Communication)	3 PHL 312, 315, REL 365, or REL 367 (satisfies CAP Practical Ethical Action)	3
Social Science (CAP)	3 Social Science	3

17

17

**Third Year**

Fall	Hours Spring	Hours
CHM 420	3 Science elective w/lab	4
CHM 462L	1 Science elective	3
MTH 207, 367, or CPS 111	3 Adv REL or PHL (Faith Traditions)	3
Science elective	3 Integrative	3
Inquiry	3 Social Science	3
General elective	2	

15

16

**Fourth Year**

Fall	Hours Spring	Hours
Science elective w/lab	4 MED 480 (capstone)	1
Diversity and Social Justice	3 Science elective	3
Adv HST	3 English elective	3
Social Science	3 General elective (optional)	3
General elective (optional)	2 General Elective (optional)	3
	General Elective (optional)	3

15

16

Total credit hours: 131

## Courses

### MED 477H. Honors Thesis. 3 Hours

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

### MED 478H. Honors Thesis. 3 Hours

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

### MED 480. Pre-Medicine Capstone. 1 Hour

No description available.

## Psychology

Majors:

- Bachelor of Arts, Psychology (p. 261)
- Bachelor of Science, Psychology (p. 262)

Minor:

- Psychology (p. 263)

Psychology is the scientific study of behavior, and as such is a diverse field that touches all aspects of human endeavor.

The Department of Psychology offers a Bachelor of Arts (B.A.) and a Bachelor of Science (B. S.) in Psychology. The department encourages students who are interested in preparation for graduate school or a career in a particular area of psychology to consult with their faculty advisor as well as the University of Dayton's Psychology Department webpage for a listing of courses that would be recommended for preparation in that area. Some examples of such areas include clinical psychology, developmental psychology, cognitive psychology, and social psychology.

Each psychology major must complete: PSY 101, PSY 201, PSY 216, and PSY 217 early in his or her academic career. Specifically, PSY 101 is required prior to taking any other psychology courses. Further, students can take no more than 6 credit hours prior to enrolling in PSY 216, and no more than 15 hours before enrolling in PSY 217. The remaining requirements are stated in the outline below. Exceptions to these requirements must be approved by the chairperson.

Psychology majors are required to attain grades of C- or better in PSY 101, PSY 201, PSY 216, and PSY 217. Further, completion of PSY 101 and 216 with a C- or better is required to transfer into the major. Students who do not earn a C- or better in PSY 216 after two attempts will be required to meet with the chairperson of the department.

Psychology majors are required to attain grades of C- or better in the following courses:

PSY 101	Introductory Psychology	3
PSY 201	Sophomore Seminar: Psychology as a Science and Profession	1
PSY 216	Elementary Statistics	3
PSY 217	Experimental Psychology	3

and any two courses from each of the two core groupings:

PSY 321	Cognitive Processes	3
PSY 322	Learning	3
PSY 323	Psychology of Perception	3
PSY 422	Physiological Psychology	3

PSY 341	Social Psychology	3
PSY 351	Child Psychology	3
PSY 361	Personality	3
PSY 363	Abnormal Psychology	3

If a C- or better is not attained, courses will have to be retaken if they are used to satisfy the psychology major.

A minor in psychology consists of eighteen semester hours, including PSY 101, one course from each of the core groupings, and three electives.

### Faculty

Keri Brown Kirschman, Chairperson

Professors Emeriti: Allik, Biers, Butter, DaPolito, Eggemeier, Korte, Kuntz, Moroney, Polzella

Professors: Reeb, Zois

Associate Professors: Bauer, Crutcher, Elvers, Katsuyama, Kirschman, Montoya, Roecker Phelps

Assistant Professors: Butler, Davis, Dixon, Fuhs, Goodnight, Kunz, O'Mara

Visiting Assistant Professor: Berry

Lecturers: Engle, Farnsworth, Layman-Guadalupe, Rodriguez

## Bachelor of Arts with a major in Psychology (psy) MINIMUM 124 HOURS

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
HST 103	West and the World
REL 103	Introduction to Religious and Theological Studies
PHL 103	Intro To Philosophy
ENG 100	Writing Seminar I <sup>2</sup>

Second-Year Writing Seminar <sup>3</sup>	0-3
ENG 200	Writing Seminar II
Oral Communication	3
CMM 100	Principles of Oral Communication

Mathematics	3
Social Science	3
Arts	3

Natural Sciences <sup>4</sup>	7
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Crossing Boundaries	variable credit
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Faith Traditions	
Practical Ethical Action	
Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

### Liberal Studies Curriculum

Creative and Performing Arts (May include CAP Arts)	3
L2 Proficiency (Proficiency in a language other than English)	0-11
Literature (May include CAP Components)	3
Mathematics (Satisfies CAP Mathematics)	6-8
MTH 207 Introduction to Statistics <sup>1</sup>	
or MTH 137 Calculus I with Review	
or MTH 148 Introductory Calculus I	
or MTH 168 Analytic Geometry & Calculus I	
Natural Sciences (Satisfies CAP Natural Sciences)	11
BIO 151 Concepts of Biology I: Cell & Molecular Biology	
BIO 151L Concepts of Biology Laboratory: Cell & Molecular Biology	
BIO 152 Concepts of Biology II: Evolution & Ecology	
BIO 152L Concepts of Biology Laboratory II: Evolution & Ecology	
CAP Natural Science lecture (specified for science majors, excluding BIO)	
Social Sciences, excluding PSY courses (Includes CAP Social Science)	12

### Major Requirements 37

PSY 101 Introductory Psychology (Satisfies CAP Social Science)	3
PSY 201 Sophomore Seminar: Psychology as a Science and Profession	1
PSY 216 Elementary Statistics	3
PSY 217 Experimental Psychology	3
Select two courses from:	6
PSY 321 Cognitive Processes	
PSY 322 Learning	
PSY 323 Psychology of Perception	
PSY 422 Physiological Psychology	
Select two courses from:	6
PSY 341 Social Psychology	
PSY 351 Child Psychology	
PSY 361 Personality	

PSY 363 Abnormal Psychology	
Select one course from: (Satisfies CAP Major Capstone)	3
PSY 471 History of Psychology	
PSY 478H Honors Thesis	3
PSY 480 Senior Seminar in Psychology	
PSY 499 Independent Research Seminar Capstone	
PSY courses (300/400 level) <sup>2, 3</sup>	12-24

### Breadth

ASI 150 Introduction to the University Experience	1
Total Hours to total at least	124

<sup>1</sup> Selection of MTH 207 is strongly recommended.

<sup>2</sup> No more than a total of six hours of PSY 352, PSY 477H, PSY 490, PSY 493, PSY 494 and/or PSY 497 may count toward the thirty-seven semester hours required in PSY for the major.

<sup>3</sup> May include CAP Components.

## Bachelor of Science with a major in Psychology (psy) MINIMUM 120 HOURS

### Common Academic Program (CAP)

*credit hours will vary depending on courses selected	
First-Year Humanities Commons <sup>1</sup>	12
HST 103 West and the World	
REL 103 Introduction to Religious and Theological Studies	
PHL 103 Intro To Philosophy	
ENG 100 Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>	0-3
ENG 200 Writing Seminar II	
Oral Communication	3
CMM 100 Principles of Oral Communication	
Mathematics	3
Social Science	3
Arts	3
Natural Sciences <sup>4</sup>	7
Crossing Boundaries	variable credit
Faith Traditions	
Practical Ethical Action	
Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

### Science Breadth Requirements

Satisfies CAP Mathematics and CAP Natural Science

Mathematics <sup>1</sup> 6-8

Select one mathematics sequence from:

MTH 137 Calculus I with Review  
& MTH 138 and Calculus I with Review

MTH 148 Introductory Calculus I  
& MTH 149 and Introductory Calculus II

MTH 168 Analytic Geometry & Calculus I  
& MTH 169 and Analytic Geometry & Calculus II

Natural Sciences <sup>2</sup> 17

### Major Requirements 37

PSY 101 Introductory Psychology 3

PSY 201 Sophomore Seminar: Psychology as a Science  
and Profession 1

PSY 216 Elementary Statistics 3

PSY 217 Experimental Psychology 3

Select two courses from: 6

PSY 321 Cognitive Processes

PSY 322 Learning

PSY 323 Psychology of Perception

PSY 422 Physiological Psychology

Select two courses from: 6

PSY 341 Social Psychology

PSY 351 Child Psychology

PSY 361 Personality

PSY 363 Abnormal Psychology

Select one course from: (Satisfies CAP Major Capstone) 3

PSY 471 History of Psychology

PSY 478H Honors Thesis 3

PSY 480 Senior Seminar in Psychology

PSY 499 Independent Research Seminar Capstone

PSY courses (300/400 level) <sup>3</sup> 12-24

### Breadth

ASI 150 Introduction to the University Experience 1

Social and Behavioral Science, excluding PSY courses (Includes  
CAP Social Science) 12

Total Hours to total at least 120

<sup>1</sup> The Mathematics requirement may also be satisfied by taking MTH 207 and one calculus course: MTH 137, or MTH 148, or MTH 168.

<sup>2</sup> Bio 151 and Bio 152 with accompanying labs are required. The remaining 9 hours may be fulfilled by courses in BIO, CHM, GEO, PHY, and CPS courses as well as by MTH courses beyond the departmental MTH requirement.

<sup>3</sup> No more than a total of six hours of PSY 352, PSY 477H, PSY 490, PSY 493, PSY 494 and/or PSY 497 may count toward the thirty-seven semester hours required in PSY for the major.

## Minor in Psychology (psy)

### Psychology

PSY 101 Introductory Psychology 3

Select one course from: 3

PSY 321 Cognitive Processes

PSY 322 Learning

PSY 323 Psychology of Perception

PSY 422 Physiological Psychology

Select one course from: 3

PSY 341 Social Psychology

PSY 351 Child Psychology

PSY 361 Personality

PSY 363 Abnormal Psychology

Select three PSY courses (300/400 level) <sup>1</sup> 9

Total Hours 18

<sup>1</sup> Only three semester hours of PSY 352, PSY 490, PSY 493, PSY 494, and/or PSY 497 may count toward the minor.

- Bachelor of Arts, Psychology (p. 261)
- Bachelor of Science, Psychology (p. 262)

## Bachelor of Arts, Psychology

### First Year

Fall	Hours Spring	Hours
ASI 150	1 PSY 216	3
PSY 101	3 ENG 100 (CAP Writing Seminar)	3
MTH 207	3 REL 103 (CAP Humanities)	3
BIO 151 & 151L	4 BIO 152 & 152L	4
Language 101	4 Language 141	4
	<b>15</b>	<b>17</b>

### Second Year

Fall	Hours Spring	Hours
HST 103 (CAP Humanities)	3 PSY 341, 351, 361, or 363	3
PSY 217	3 PHL 103	3
Language context	3 CMM 100 (CAP Communication)	3
MTH 137, 148, or 168	3-4 SSC 200	3
ENG 200	3 Science course	3
PSY Sophomore Seminar	1	
	<b>16-17</b>	<b>15</b>

### Third Year

Fall	Hours Spring	Hours
PSY 341, 351, 361, or 363	3 Literature course	3
PSY 321, 322, 323, or 422	3 PSY 321, 322, 323, or 422	3
Social Science (Intro Level)	3 PSY at 300 or 400 level	3
Arts	3 Advanced REL or PHL	3
Faith Tradition	3 Advanced HST	3
	PSY mini course	1
	<b>15</b>	<b>16</b>

**Fourth Year**

Fall	Hours Spring	Hours
PSY at 300 or 400 level	3 PSY Capstone	3
PSY at 300 or 400 level	3 Inquiry	3
Social Science (Intro Level)	3 Diversity and Social Justice	3
Integrative	3 PSY at 300 or 400 level	3
Practical Ethical Adv PHL or REL	3 Social Science at 300 or 400 level	3
	<b>15</b>	<b>15</b>

Total credit hours: 124-125

**Bachelor of Science, Psychology****First Year**

Fall	Hours Spring	Hours
ASI 150	1 MTH 149	3
BIO 151 & 151L	4 BIO 152 & 152L	4
MTH 148	3 PSY 216	3
ENG 100 (CAP writing seminar)	3 REL 103 (CAP humanities)	3
HST 103 (CAP Humanities)	3 PHL 103 (CAP humanities)	3
PSY 101	3	
	<b>17</b>	<b>16</b>

**Second Year**

Fall	Hours Spring	Hours
Natural Science elective	3 Natural Science elective	3
PSY 217	3 PSY 321, 322, 323, or 422	3
PSY 341, 351, 361, or 363	3 PSY 341, 351, 361, or 363	3
ENG 200	3 Arts Study	3
CMM 100 (CAP Communication)	3 SSC 200	3
PSY Sophomore seminar	1	
	<b>16</b>	<b>15</b>

**Third Year**

Fall	Hours Spring	Hours
Natural Science elective	3 PSY at 300 or 400 level	3
PSY 321, 322, 323, or 422	3 PSY at 300 or 400 level	3
Faith Tradition or Adv REL	3 Inquiry	3
Practical Ethical Action	3 Adv REL or PHL	3
Social Science	3 Adv HST	3
	<b>15</b>	<b>15</b>

**Fourth Year**

Fall	Hours Spring	Hours
PSY Capstone	3 General elective	3
PSY at 300 or 400 level	3 PSY at 300 or 400 level	3
Social Science	3 Diversity and Social Justice	3
Integrative	3 General elective	3
General elective	3 Social Science	3
	<b>15</b>	<b>15</b>

Total credit hours: 124

**Courses****PSY 101. Introductory Psychology. 3 Hours**

Study of human behavior including development, motivation, emotion, personality, learning, perception; general application of psychological principles to personal, social, and industrial problems. Students must participate in departmental research.

**PSY 201. Sophomore Seminar: Psychology as a Science and Profession. 1 Hour**

Introduction to the science and profession of psychology including the nature and breadth of psychological study and career exploration. Prerequisite(s): PSY 101.

**PSY 216. Elementary Statistics. 3 Hours**

Basic probability and applied statistics: measures of central tendency and dispersion, sampling, estimation, hypothesis testing, tests between means, linear regression, correlation, and ANOVA. Prerequisite(s): MTH 102 or higher; PSY 101.

**PSY 217. Experimental Psychology. 3 Hours**

Basic concepts of scientific methods as applied to psychological problems. Experiments to familiarize students with application of scientific methodology to study of human psychological processes. Required of all psychology majors. Prerequisite(s): PSY 101, PSY 216.

**PSY 251. Human Growth & Development. 3 Hours**

Focuses on stages of human development from infancy through the aging adult. Emphasis is on various theoretical approaches and the development associated with each stage. Psychology majors may not take for credit toward major. Prerequisite(s): PSY 101.

**PSY 317. Advanced Research Methods. 3 Hours**

Advanced application of statistical and research methods learned in PSY 216 and PSY 217 to the design, analysis, and write-up of an original empirical study. Research area will vary according to instructor expertise. Prerequisite(s): PSY 217.

**PSY 321. Cognitive Processes. 3 Hours**

Information-processing approach to attention, perception, memory, imagery, and thought. Theoretical structures including neuron modeling of higher cognitive and experimental processes. Prerequisite(s): PSY 101.

**PSY 321H. Cognitive Processes. 3 Hours**

Information-processing approach to attention, perception, memory, imagery, and thought. Theoretical structures including neuron modeling of higher cognitive and experimental processes. Prerequisite(s): PSY 101.

**PSY 321L. Cognitive Processes Laboratory. 1 Hour**

In-depth discussion of seminal research in cognition. Collection, analysis, and interpretation of data. Prerequisite(s): (PSY 101, PSY 216, PSY 217, PSY 321) or permission of instructor.

**PSY 322. Learning. 3 Hours**

Foundations of the learning process. Classical and instrumental paradigms and variants of each considered in preparation for investigations of complex learning. Prerequisite(s): PSY 101.

**PSY 323. Psychology of Perception. 3 Hours**

Introduction to major theoretical and experimental work in perception, including visual, auditory, proprioceptive, and other sensory systems. Prerequisite(s): PSY 101.

**PSY 323H. Psychology of Perception. 3 Hours**

Introduction to major theoretical and experimental work in perception, including visual, auditory, proprioceptive, and other sensory systems. Prerequisite(s): PSY 101.

**PSY 333. Psychological Tests & Measurements. 3 Hours**

Survey of major tests of intelligence, aptitude, interest, and personality presently used in clinics, schools, personnel offices, and research settings. Emphasis on evaluation and comparison, rationale of construction, ethical considerations. Prerequisite(s): (PSY 101, PSY 216) or equivalent.

**PSY 334. Industrial Psychology. 3 Hours**

Introduction to modern efforts to improve human performance in industrial organizations and society; selection and placement of employees, morale, training, and incentives. Prerequisite(s): PSY 101.

**PSY 341. Social Psychology. 3 Hours**

Survey of major theoretical and experimental work in the field; attitudes, conformity, emotions, group dynamics.

**PSY 341H. Social Psychology. 3 Hours**

Survey of major theoretical and experimental work in the field; attitudes, conformity, emotions, group dynamics.

**PSY 344. Interpersonal Relationships. 3 Hours**

Social psychological research in nonverbal behavior, social exchange, self-disclosure, and interpersonal attraction and how these are related to developing relationships. Prerequisite(s): PSY 101.

**PSY 351. Child Psychology. 3 Hours**

Study of psychological processes from the developmental point of view; changes in perception, cognition, emotion, and social behavior from infancy to adolescence. Prerequisite(s): PSY 101.

**PSY 351H. Child Psychology. 3 Hours**

Study of psychological processes from the developmental point of view; changes in perception, cognition, emotion, and social behavior from infancy to adolescence. Prerequisite(s): PSY 101.

**PSY 352. Field Experience in Child Psychology. 1 Hour**

Practical experience with a community agency providing instructional, recreational, or therapeutic services. Volunteer four to five hours weekly. Prerequisite(s): PSY 101; PSY 351 (may be taken as a corequisite).

**PSY 353. The Psychology of Adult Development & Aging. 3 Hours**

Provides a general introduction to the multi-disciplinary field of adulthood and aging with a specific focus on aspects of interest to psychologists: cognitive, intellectual, personality, and biological changes across adult development. Prerequisite(s): PSY 101.

**PSY 353H. The Psychology of Adult Development & Aging. 3 Hours**

Provides a general introduction to the multi-disciplinary field of adulthood and aging with a specific focus on aspects of interest to psychologists: cognitive, intellectual, personality, and biological changes across adult development. Prerequisite(s): PSY 101.

**PSY 355. Developmental Psychopathology. 3 Hours**

Survey of developmental theory and research related to the psychopathology of infants, children, and adolescents. Focus is on etiology, identification, and intervention. Prerequisite(s): (PSY 101, PSY 351) or permission of instructor.

**PSY 355H. Developmental Psychopathology. 3 Hours**

Survey of developmental theory and research related to the psychopathology of infants, children, and adolescents. Focus is on etiology, identification, and intervention. Prerequisite(s): (PSY 101, PSY 351) or permission of instructor.

**PSY 361. Personality. 3 Hours**

Introduction to the study of personality through analysis of such major theories as those of Freud, Skinner, Maslow, and Rogers. The development of personality and the stability of personality characteristics over time. Review of clinical and experimental findings. Prerequisite(s): PSY 101.

**PSY 363. Abnormal Psychology. 3 Hours**

Patterns of disordered behavior; social, psychological, and physiological factors; theoretical explanations of abnormal behavior. Prerequisite(s): PSY 101.

**PSY 363H. Abnormal Psychology. 3 Hours**

Patterns of disordered behavior; social, psychological, and physiological factors; theoretical explanations of abnormal behavior. Prerequisite(s): PSY 101.

**PSY 364. Psychotherapy. 3 Hours**

Survey of current types of psychotherapy. Emphasis on similarities and differences in underlying theories of behavioral change and associated techniques. Prerequisite(s): PSY 101.

**PSY 366. Health Psychology. 3 Hours**

Explores psychological research, theory, and techniques in health-related areas, such as health promotion, the identification of contributors to illness, illness prevention, stress and coping, stress management, changing health beliefs and behavior, pain and its management, and the management of chronic and terminal illnesses.

**PSY 366H. Health Psychology. 3 Hours**

Explores psychological research, theory, and techniques in health-related areas, such as health promotion, the identification of contributors to illness, illness prevention, stress and coping, stress management, changing health beliefs and behavior, pain and its management, and the management of chronic and terminal illnesses.

**PSY 368. Community Psychology. 3 Hours**

The application of psychological principles to the understanding and prevention of prevalent community problems including teen pregnancy, school violence, mental illness, substance abuse, homelessness and poverty. Prerequisite(s): PSY 101.

**PSY 375. Psychology of the Arts. 3 Hours**

Explores the psychological experiences associated with the creation and appreciation of music, art, and literature. Course content is presented in terms of the theories, methods, and research findings in the fields of perception, cognition, and development.

**PSY 410. Questionnaire Design. 3 Hours**

Students will learn about critical issues in questionnaire design and use, the advantages/disadvantages of questionnaires, types of questionnaires, questionnaire development strategies, scale selection, and how to evaluate questionnaires. Students will develop, test and evaluate a questionnaire in a domain of interest to them. Depending on the size of the effort, students may work in teams.

**PSY 410H. Questionnaire Design. 3 Hours**

Students will learn about critical issues in questionnaire design and use, the advantages/disadvantages of questionnaires, types of questionnaires, questionnaire development strategies, scale selection, and how to evaluate questionnaires. Students will develop, test and evaluate a questionnaire in a domain of interest to them. Depending on the size of the effort, students may work in teams.

**PSY 422. Physiological Psychology. 3 Hours**

Neurophysiological analysis of attention, sensation, perception, emotion, motivation, and learning. Electrophysiological methods are discussed. Prerequisite(s): PSY 101.



**PSY 431. Interviewing & Counseling. 3 Hours**

Integrated approach to the theory, techniques, skills, and values of interviewing and counseling. Practice through written assignments, self study, classroom exercises, and role-playing. Prerequisite(s): PSY 101.

**PSY 435. Human Factors. 3 Hours**

Students learn methods to improve the interface between humans and their environment. Human characteristics are studied to determine the best way to design the task, product, workstation, or other environmental features to accommodate the human. Students in the School of Engineering must have junior or senior status.

**PSY 443. Psychology of Women. 3 Hours**

Survey of topics related to the psychology of women, such as gender identity and roles, theories of female development, relationships, achievement, language, health issues, spirituality, sexuality, and violence. Prerequisite(s): PSY 101.

**PSY 444. Environmental Psychology. 3 Hours**

Study of the effects of the physical and social environment on human behaviors, attitudes, and affective responses. Prerequisite(s): (PSY 101, PSY 341) or permission of instructor.

**PSY 445. Technology, Environment & Behavior. 3 Hours**

Examines the cultural bases for the individual and societal choices which humans make about their use of technology. Technology is broadly defined to include human-machine systems.

**PSY 450. Psychology for Ministry. 3 Hours**

Human development and adjustment, interpersonal communication, and the psychology of religion. Prerequisite(s): Acceptance into the Lay Ministry Program or permission of instructor.

**PSY 451. Psychology of Religion. 3 Hours**

Addresses the psychological study of the nature of religion and religious experience; explores the development of internalized beliefs, attitudes, and values and the effect they have on individual functioning. An introductory course in psychology is highly recommended. Prerequisite(s): Junior or senior standing.

**PSY 452. Cognitive Development in Children. 3 Hours**

Major approaches to the study of cognitive development; attentional and mediational development in children's learning, memory, and problem solving; language development and Piaget's theory. Prerequisite(s): (PSY 101, PSY 351) or permission of instructor.

**PSY 452H. Cognitive Development in Children. 3 Hours**

Major approaches to the study of cognitive development; attentional and mediational development in children's learning, memory, and problem solving; language development and Piaget's theory. Prerequisite(s): (PSY 101, PSY 351) or permission of instructor.

**PSY 457. Television & Its Effects on Children. 3 Hours**

Readings in psychological research on the broad effects of television on children. Emphasis on analyzing and evaluating the research. Prerequisite(s): PSY 101.

**PSY 461. Current Implications of Drug Dependency. 3 Hours**

Survey of effects, symptoms, treatment, causalities, and myths associated with drug use and abuse. Emphasis on existing treatment methods and psychological implications of drug dependency. Prerequisite(s): PSY 101.

**PSY 461H. Current Implications of Drug Dependency. 3 Hours**

Survey of effects, symptoms, treatment, causalities, and myths associated with drug use and abuse. Emphasis on existing treatment methods and psychological implications of drug dependency. Prerequisite(s): PSY 101.

**PSY 462. Human Sexuality. 3 Hours**

Psychological factors in human sexuality including developmental, biological, and social perspectives. Such topics as sexual orientation, gender identity and roles, sexual relationships, sexual dysfunction, power and violence, and commercialization.

**PSY 462H. Human Sexuality. 3 Hours**

Psychological factors in human sexuality including developmental, biological, and social perspectives. Such topics as sexual orientation, gender identity and roles, sexual relationships, sexual dysfunction, power and violence, and commercialization.

**PSY 471. History of Psychology. 3 Hours**

The evolution of psychology from its origins in philosophy, science, clinical, and applied settings. Emphasis on integrating these systems and schools of thought with modern psychology. Prerequisite(s): PSY 101 or permission of instructor.

**PSY 477H. Honors Thesis. 3 Hours**

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

**PSY 478H. Honors Thesis. 3 Hours**

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

**PSY 480. Senior Seminar in Psychology. 3 Hours**

Advanced exploration of the meaning of scholarship to the vocation of psychology. Students will engage in critical review of readings in psychology and develop a scholarly project consistent with discipline standards and suited to the professional goals of the student. Prerequisite(s): PSY 217.

**PSY 490. Internship in Psychology. 1-6 Hours**

Supervised experience arranged on an individual basis in appropriate settings. For junior or senior psychology majors who have completed prescribed course work only. Consult internship director for details. May be repeated up to six semester hours. Grade Option Two only.

**PSY 493. Independent Study. 1-6 Hours**

Problems of special interest investigated under faculty direction. Area and criteria for evaluation to be specified prior to registration. May be repeated up to six semester hours. Prerequisite(s): Permission of instructor.

**PSY 494. Readings in Psychology. 1-6 Hours**

Directed reading in a specific area of interest, under faculty supervision. Topic and criteria for evaluation to be specified prior to registration. May be repeated up to six semester hours. Prerequisite(s): Permission of instructor.

**PSY 495. Special Topics in Psychology. 1-3 Hours**

Topics of special interest to faculty and students; intensive critical evaluation of appropriate literature. Prerequisite(s): Permission of instructor.

**PSY 495H. Special Topics in Psychology. 1-3 Hours**

Topics of special interest to faculty and students; intensive critical evaluation of appropriate literature. Prerequisite(s): Permission of instructor.

**PSY 497. Service Learning Experience. 1 Hour**

Supervised community research or service experience that complements a specific upper division course in Psychology. Repeatable up to three semester hours. Corequisite(s): A 300-400 level Psychology course.

**PSY 499. Independent Research Seminar Capstone. 3 Hours**

Project and presentation of special interest investigated under faculty direction.

## Religious Studies

Major:

- Bachelor of Arts, Religious Studies (p. 267)

Minors:

- Religious Studies (p. 268)
- Religious Studies- Catechesis (p. 268)

The Department of Religious Studies sees itself as a community of scholars serving the University community and the local community by teaching, research, criticism, and action. The main concern of the department is an understanding and elucidation of the Judaeo-Christian religious experience as it is exemplified in the Roman Catholic tradition. This implies not only a deep investigation of the Roman Catholic position but also a dialogue with other Christian traditions and with other world religions.

Students majoring in religious studies ordinarily follow one of five tracks in the major:

- Students preparing for ministry in a Christian church (e.g., pastoral associates, youth ministry, parish religious educators) follow the "Ministry" track.
- Students preparing to teach religion in elementary or secondary schools follow the "Catholic Schools" track.
- Students preparing for graduate study in Christian theology, systematics, church history, ethics, etc., follow the "Graduate School Preparation" track.
- Students preparing for graduate study of religions other than Christianity and/or interested in world religions follow the "World Religions" track.
- Students wishing to study religion as a way of broadening their horizons or who are interested in religious studies as an undergraduate major follow the "General" track.
- All religious studies majors must show basic practical communicative proficiency in one foreign language.

A minor in religious studies consists of 18 semester hours, which includes REL 103 (or REL 198 or ASI 110). At least three semester hours are to be at the 400-level.

A minor in Catechesis consists of 19 semester hours, not including REL 103 (or REL 198 or ASI 110.)

### Faculty

Daniel Speed Thompson, Chairperson

Professors Emeriti: Anderson, Buby, Burns, Friedland, Hater, L'Heureux, Martin, Thimmes

Professors: Barnes, Branick, Doyle, Inglis (Philosophy), Kallenberg, Miller, Portier, Roberts, Trollinger (History), Zukowski

Associate Professors: Bennett, Bunta, Johnson, Johnston, Moore, Orji, Smith, Thompson, Yocum

Assistant Professors: DeAnda, Henning, Kozar, McGrath, Salih

Lecturers: Ryan

## Bachelor of Arts with a major in Religious Studies (rel) Minimum 124 Hours

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
HST 103	West and the World
REL 103	Introduction to Religious and Theological Studies
PHL 103	Intro To Philosophy
ENG 100	Writing Seminar I <sup>2</sup>
Second-Year Writing Seminar <sup>3</sup>	0-3
ENG 200	Writing Seminar II
Oral Communication	3
CMM 100	Principles of Oral Communication
Mathematics	3
Social Science	3
Arts	3
Natural Sciences <sup>4</sup>	7
Crossing Boundaries	variable credit
Faith Traditions	
Practical Ethical Action	
Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

### Major Requirements <sup>1, 2, 3</sup> 36

REL 103	Introduction to Religious and Theological Studies	3-7
or ASI 110	The Roots and Development of Western Culture in a Global Context	
REL 490	Capstone Seminar (Satisfies CAP Major Capstone)	3

### Select one track from:

Ministry	30
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REL 315	The Gospels
REL 323	History of Christianity I
or REL 324	History of Christianity II
REL 360	Christian Ethics
REL 437	Significance of Jesus
REL 440	The Church
REL 443	The Sacraments
REL 485	Lay Ministry
Select one course in each: Old Testament, world religions, religion and culture	
<b>Catholic Schools</b>	30
REL 323	History of Christianity I
or REL 324	History of Christianity II
REL 327	United States Religious Experience
or REL 328	United States Catholic Experience
or REL 329	African-American Religion
REL 360	Christian Ethics
REL 383	Philosophy of Religious Education
or REL 487	Religious Education- Theory & Practice
Select one course in each: Old Testament, New Testament, world religions, religion and culture; two courses in systematic theology	
<b>Graduate School Preparation</b>	30
REL 323	History of Christianity I
REL 324	History of Christianity II
REL 437	Significance of Jesus
REL 440	The Church
or REL 443	The Sacraments
Select one course in each: Old Testament, New Testament, ethics, world religions, religion and culture, systematic theology	
<b>World Religions</b>	30
REL 323	History of Christianity I
or REL 324	History of Christianity II
Select three courses from:	
REL 304	Hinduism
REL 305	Eastern Orthodoxy
REL 306	Buddhism
REL 307	Judaism
REL 308	Islam
Select one course in each: Old Testament, New Testament, ethics, systematic theology, religion and culture	
REL elective	
<b>General</b>	30
Select one course in each: Old Testament, New Testament, world religions, church history, systematic theology, ethics, religion and culture	
REL elective	

## Minor in Religious Studies (rel)

<b>Religious Studies</b>	
Select eighteen REL semester hours <sup>1</sup>	18
<b>Total Hours</b>	18

<sup>1</sup> At least three semester hours at the 400 level.

## Minor in Religious Studies-Catechesis (Cte)

The Minor in Religious Studies - Catechesis (CTE) offers students an excellent opportunity to prepare to teach religion (catechesis) in Catholic schools, or parish ministry today. The minor is grounded in the official principles of catechesis required by the United States Conference of Catholic Bishops. The minor incorporates the basic courses required by most dioceses across the country for achieving diocesan certification in content, methodology and praxis experiences. It is open to all students who desire to engage in a religion teaching ministry either on a full-time professional or a volunteer basis following graduation.

### Religious Studies - Catechesis <sup>1</sup>

REL 328	United States Catholic Experience <sup>2</sup>	3
Forum for Young Catechetical Leaders		4
REL 281	Forum for Catechetical Leaders I	
REL 282	Forum for Catechetical Leaders II	
REL 283	Forum for Catechetical Leaders III	
REL 284	Forum for Catechetical Leaders IV	
Select one Liturgy course from:		3
REL 356	The Christian Tradition of Prayer	
REL 383	Philosophy of Religious Education	
REL 443	The Sacraments	
REL 446	Christian Liturgy	
REL 488	Spirituality & Religious Education	
Select one Scripture course from:		3
REL 310	The Pentateuch	
REL 311	The Prophets	
REL 315	The Gospels	
REL 318	Studies in Paul	
Select one Morality or Ethics course from:		3
REL 360	Christian Ethics	
REL 363	Faith & Justice	
REL 364	Current Moral Issues	
Select one Ecclesiology or Church History course from:		3
REL 323	History of Christianity I	
REL 324	History of Christianity II	
REL 440	The Church	
<b>Total Hours</b>		19

<sup>1</sup> These hours are in addition to REL 103 (or REL 198 or ASI 110), which is usually taken in the student's first year.

<sup>2</sup> Or equivalent.

### First Year

Fall	Hours Spring	Hours
ASI 150	1 ASI 120	8
ASI 110	7 Language	4
CMM 100	3 MTH (CAP Mathematics)	3
Language	4	
	<b>15</b>	<b>15</b>

**Second Year**

Fall	Hours Spring	Hours
SSC 200 (CAP Social Science)	3 CAP Arts	3
INSS (CAP Natural Science)	4 INSS (CAP Natural Science)	4
Literature	3 REL Major elective	3
Language	3 REL Major elective	3
REL Major Elective	3 Social Science	3
	<b>16</b>	<b>16</b>

**Third Year**

Fall	Hours Spring	Hours
Creative & Performing Arts	3 Adv HST	3
INSS (CAP Inquiry)	3 Adv PHL	3
REL Major	3 REL Major	3
REL Major (CAP Faith Trad)	3 REL Major	3
Social Science	3 Social Science	3
	<b>15</b>	<b>15</b>

**Fourth Year**

Fall	Hours Spring	Hours
Adv PHL (CAP Practical Ethical Action)	3 Diversity and Social Justice	3
CAP Integrative	3 REL Major	3
REL Major	3 REL 490	3
REL Major	3 General elective	3
General elective	3 General elective	3
General elective	2	
	<b>17</b>	<b>15</b>

Total credit hours: 124

**Courses****REL 103. Introduction to Religious and Theological Studies. 3 Hours**

This course introduces students to two academic disciplines: the study of religions as historical and embodied realities, and theology as faith seeking understanding. By learning about these two disciplines, students will gain a critical self-awareness of the ways in which the modern context shapes their engagement with religion. The course emphasizes learning how to read Scripture and other primary religious sources, and to learning how the Catholic intellectual tradition addresses the question of God, the meaning of human life, and the significance of human diversity.

**REL 103H. Introduction to Religious and Theological Studies. 3 Hours**

This course introduces students to two academic disciplines: the study of religions as historical and embodied realities, and theology as faith seeking understanding. By learning about these two disciplines, students will gain a critical self-awareness of the ways in which the modern context shapes their engagement with religion. The course emphasizes learning how to read Scripture and other primary religious sources, and to learning how the Catholic intellectual tradition addresses the question of God, the meaning of human life, and the significance of human diversity.

**REL 198. Religioius Studies Scholars' Seminar. 3 Hours**

Study and seminar discussion of major types of religions in history and some of their practices, values, beliefs, historical development, and theological reflection, including Catholic tradition; review of major theories on the nature, origin, and function of religion in human life. Open by permission only to first-year students in the Berry Scholars Program.

**REL 210. Introduction to Scripture. 1 Hour**

An introductory overview of Christian scripture that is foundational for Old and New Testament online courses.

**REL 211. Introduction to the Old Testament. 1 Hour**

Study of contemporary Old Testament studies to learn how to read a biblical text in terms of its literary qualities and cultural influences on interpretations.

**REL 212. Introduction to the New Testament. 1 Hour**

Introduction to the New Testament with a focus on the text's cultural contexts, literary composition, theological themes, and pastoral applications.

**REL 260A. Catholic Social Teaching I. 1 Hour**

The first of two courses that provide background on Catholic social teaching as articulated in the Catechism of the Catholic Church and Episcopal documents.

**REL 260B. Catholc Social Teaching II. 1 Hour**

The second of two courses that provide background on Catholic social teaching as articulated in the Catechism of the Catholic Church and Episcopal documents. Prerequisite(s): REL 260A.

**REL 281. Forum for Catechetical Leaders I. 1 Hour**

Study of key themes of The National Directory for Catechesis regarding 'The Tasks of Catechesis and Faith Formation'. Themes include (a) Introduction to the Catechetical Ministry of the Church, (b) The Vocation of the Catechist, (c) Faith Formation, and (d) Fundamentals for Designing Catechetical Plans. Prerequisite(s): ASI 110 or REL 103.

**REL 282. Forum for Catechetical Leaders II. 1 Hour**

Study of key themes of The National Directory for Catechesis regarding 'The Art of Communicating Faith: Scripture and Tradition'. Themes include (a) Effective Catechesis, (b) Four Pillars of Our Catholic Faith, (c) Integrating Scripture in Catechetical Ministry, and (d) Integrating Liturgy and Liturgical Experiences in Catechetical Ministry. Prerequisite(s): ASI 110 or REL 103.

**REL 283. Forum for Catechetical Leaders III. 1 Hour**

Study of key themes of The National Directory for Catechesis regarding: 'Liturgy, Popular Devotions, Literature and the Religious Imagination. Themes include (a) Storytelling, (b) Popular Devotions and Faith Experiences, (c) Role of Mary in Catechesis, and (d) Diverse Religious Traditions and the Quest for God. Prerequisite(s): ASI 110 or REL 103.

**REL 284. Forum for Catechetical Leaders IV. 1 Hour**

Study of key themes of The National Directory for Catechesis regarding: 'Discipleship (Catholic Moral Life), Catholic Social Teachings and Catechetical Planning'. Themes include (a) Developing a Pastoral Catechetical Plan, (b) Call and Challenge of Discipleship, (c) Catholic Social Teachings, and (d) Communications Technology and Catechesis. Prerequisite(s): ASI 110 or REL 103.

**REL 300. Rel of the East. 3 Hours**

Course description is currently unavailable.

**REL 304. Hinduism. 3 Hours**

Study of the world's oldest living religion. Examines the historical development of major Hindu teachings, texts, practices and paths from ancient times to present, including forms of Hinduism taking root in the West today. Prerequisite(s): (ASI 110 or ASI 120 or equivalent) or (REL 103 or 198).



**REL 305. Eastern Orthodoxy. 3 Hours**

Exploration of the history and theology of the Eastern Orthodox Church, from the Apostles to Byzantium to Russia and the United States.

Prerequisite(s): (ASI 110 or ASI 120 or equivalent) or (REL 103 or REL 198).

**REL 306. Buddhism. 3 Hours**

Exploration of the 2,500-year-old Buddhist tradition - the life of its founder, development of its teachings, rituals, and meditation techniques. Survey of the spread of Buddhism to the West in the twentieth century. Parallels and contrasts with the Christian tradition. Prerequisite(s): (ASI 110, ASI 120 or equivalent) or (REL 103 or REL 198).

**REL 307. Judaism. 3 Hours**

Basic introduction to Judaism: its history, its faith, its worship.

Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 307H. Judaism. 3 Hours**

Basic introduction to Judaism: its history, its faith, its worship.

Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 308. Islam. 3 Hours**

Exploration of the Islamic religious traditions: the life of Islam's founder, the development of its teaching and ritual, its spread from North Africa into Europe, Asia, Oceania, its influence on culture and its contemporary resurgence. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 309. Afro-Latin Religions. 3 Hours**

The study of Voudou, Santeria and other religions which arose when the religious traditions of West Africa were transplanted to the Americas and the Caribbean where practitioners encountered Christianity. These religions' historical and contemporary forms as well as issues of syncretism and church-state relations are considered. Prerequisite(s): ASI 110 or (REL 103 or REL 198).

**REL 310. The Pentateuch. 3 Hours**

Examination of the first five books of the Hebrew Bible, known as the Torah or Pentateuch, emphasizing the traditions that relate primeval beginnings, ancestral history, the exodus, wilderness wanderings, and the legal codes. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 311. The Prophets. 3 Hours**

The prophetic texts of the Old Testament studied as reformulations of ancient religious traditions to meet new historical situations. The relevance of the prophets to contemporary life and throughout. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 312. The Psalms & the Wisdom Literature. 3 Hours**

Critical examination of the biblical books of Psalms, Proverbs, Job, Ecclesiastes, and Ben Sira and of related literature within the historical context in which they arose. The contemporary relevance of this literature. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 315. The Gospels. 3 Hours**

With the Gospel of Mark as a point of departure, comparison of the Markan, Matthean, and Lukan narratives for an understanding of the various conceptions of Jesus found in these Gospels. The course includes historical-critical study of the Gospel to John, its text, literary techniques, structure and theology. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 316. New Testament Theologies. 3 Hours**

Survey of New Testament writings with a focus on the religious ideas specific to each; special attention to authors' christology, eschatology, and soteriology; exploration of relevance of the New Testament message to Christian faith today. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 318. Studies in Paul. 3 Hours**

Detailed examination of the letters of Paul, stressing the historical circumstances affecting their composition as well as the main religious ideas of Paul that govern their content. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 319. The Book of Revelation. 3 Hours**

Detailed critical analysis of various biblical apocalyptic texts as found in Judaism and early Christianity. Focus on the Book of Revelation against the background of other biblical and intertestamental apocalyptic texts. Prerequisite(s): (ASI 111, ASI 112 or equivalent) or (REL 103 or REL 198).

**REL 323. History of Christianity I. 3 Hours**

Study of important events movements, ideas, and people in the development of Christianity to the year 1100 including the formation of the Canon, early Church councils, Augustine, Gregory the Great, monasticism, the rise of Islam, Eucharistic and other controversies, and the Gregorian Reform. Prerequisite(s): (ASI 111, ASI 112 or equivalent) or (REL 103 or REL 198).

**REL 324. History of Christianity II. 3 Hours**

Study of important events, movements, ideas, and people in the development of Christianity from 1100 to the present, including the separation of the Churches of the East and West, rise of the mendicant orders, Scholasticism, key themes and figures of the Reformation, Vatican I, Modernist crisis, ecumenism, and Vatican II. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 324H. History of Christianity II. 3 Hours**

Study of important events, movements, ideas, and people in the development of Christianity from 1100 to the present, including the separation of the Churches of the East and West, rise of the mendicant orders, Scholasticism, key themes and figures of the Reformation, Vatican I, Modernist crisis, ecumenism, and Vatican II. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 326. Protestant Christianity. 3 Hours**

Survey of the development of Protestant thought from the Reformation. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 327. United States Religious Experience. 3 Hours**

Study of a variety of religious traditions in their engagement with and influence within the U.S. social and cultural context including the effects of pluralism, religious liberty, secularization, and consumer capitalism. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 328. United States Catholic Experience. 3 Hours**

The growth and development of Catholic christianity in the U.S.; its interaction with America, its culture, and its people. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 329. African-American Religion. 3 Hours**

An exploration of the history and theology of African-American religious traditions and how African-American religion has influenced African-American social, political, economic, and cultural movements from the time of slavery to the present. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 330. Faith of Immigrants. 3 Hours**

This course will examine the faith traditions of all those people who came to the United States, either voluntarily or involuntarily, and the changes that they made upon those who were there before them, the changes in their own faith, and the effect upon other faith traditions.

**REL 344. Christian Marriage. 3 Hours**

Analysis of the sanctifying dignity of Christian marriage as a sacrament and commitment to share in the divine creative plan. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 352. Understanding Sacred Music in Worship in the Local Church. 3 Hours**

Focus on the important relationship between music and worship in the life of the church with an emphasis on major contemporary trends in sacred music and work. An historical overview of music and worship with biblical foundations for both are provided. Prerequisite(s): REL 103 (ASI 110/120).

**REL 352H. Sacred Mus & Worship. 3 Hours****REL 356. The Christian Tradition of Prayer. 3 Hours**

Study of several types and forms of Christian prayer from various periods in Church history. The meaning of the act of faith expressed in prayer and its relationship to belief. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 356H. The Christian Tradition of Prayer. 3 Hours**

Study of several types and forms of Christian prayer from various periods in Church history. The meaning of the act of faith expressed in prayer and its relationship to belief. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 358. Liberation Theology. 3 Hours**

Historical-critical analysis and study of the theology of liberation and its specific expression among theologians of the Third World, particularly Latin America. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 360. Christian Ethics. 3 Hours**

Introduction to the reflection upon Christian morality; discussion of various approaches in Christian ethics, the elements of ethical judgments, and some specific ethical issues. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 360H. Christian Ethics. 3 Hours**

Introduction to the reflection upon Christian morality; discussion of various approaches in Christian ethics, the elements of ethical judgments, and some specific ethical issues. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 362. Christian Family Values & Television. 3 Hours**

Comparative study of the criteria and rationale for family life in various Christian pronouncements with present values and practices in society as reflected in and promoted by current television programming. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 363. Faith & Justice. 3 Hours**

This course explores the history, development, and basic principles of Catholic social teaching as well as other approaches to faith and justice. Issues of economic justice will receive special emphasis. In addition to church documents, the life and work of religious thinkers and activists will be examined. Prerequisite(s): (ASI 111, ASI 112 or equivalent) or (REL 103 or REL 198).

**REL 363H. Faith & Justice. 3 Hours**

This course explores the history, development, and basic principles of Catholic social teaching as well as other approaches to faith and justice. Issues of economic justice will receive special emphasis. In addition to church documents, the life and work of religious thinkers and activists will be examined. Prerequisite(s): (ASI 111, ASI 112 or equivalent) or (REL 103 or REL 198).

**REL 364. Current Moral Issues. 3 Hours**

An examination of one or more issues (individual and/or social) in contemporary reflection on Christian moral life. May be repeated when topic changes. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 365. Christian Ethics & the Environment. 3 Hours**

Christian ethic of relationality and responsibility. Explores various approaches and related values found in society; elements of ethical judgments; and specific ethical issues resulting from ecofeminist, technological, and ecological awareness. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 366. The Holocaust: Theological & Religious Responses. 3 Hours**

Examination of the religious and theological literature of the Holocaust, focusing especially on Jewish and Christian responses. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 367. Christian Ethics & Health Care Issues. 3 Hours**

Study of, and reflection upon, the principles of Christian ethics as these relate to the health care professions. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 367H. Christian Ethics & Health Care Issues. 3 Hours**

Study of, and reflection upon, the principles of Christian ethics as these relate to the health care professions. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 368. Christian Ethics & the Business World. 3 Hours**

Study of, and reflection upon, the principles of Christian ethics as these relate to the business world. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 368H. Christian Ethics & the Business World. 3 Hours**

Study of, and reflection upon, the principles of Christian ethics as these relate to the business world. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 369. Ethics by Design: Theological Ethics and Engineering. 3 Hours**

Study in theological virtue ethics using engineering design as the paradigm for practical reasoning in both technology and everyday life. Practice in formulating proper ethical arguments using standard notions of claim, grounds, warrant and backing. Course culminates in design teams constructing proper ethical argument (claim, grounds, warrants, backing) over some contemporary engineering artifact, process or issue. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 369H. Ethics by Design. 3 Hours**

Study in applied Christian ethics addressing the moral issues facing engineers. How to make a moral decision, engineering as a profession, codes of ethics, safety, environmental issues, confidentiality, employee rights, whistleblowing, consulting, conflicts, and career choices. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 372. Religion & Film. 3 Hours**

Study of issues common to narrative films and religious thought; the power of various film techniques, dominant models in religious and film reflection, the similar roles imagination plays in film and religious thought. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 373. Religion & Literature. 3 Hours**

Joint study of literature and religion, seeking the sacred in the secular, discussing the doctrines of humans and of God in major modern writings, especially those of current collegiate interest. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 374. Religion & the Arts. 3 Hours**

Investigation of the religious interpretation of various art forms and the process by which the aesthetic experience assists in theological perception and construction. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 374H. Religion & the Arts. 3 Hours**

Investigation of the religious interpretation of various art forms and the process by which the aesthetic experience assists in theological perception and construction. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 375. Religion & Science. 3 Hours**

Surveys of the ways science has affected religion on specific doctrines, methods of knowing what is true, and general world views; study of religious response to these. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 375H. Religion & Science. 3 Hours**

Surveys of the ways science has affected religion on specific doctrines, methods of knowing what is true, and general world views; study of religious response to these. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 376. Theology & the Social Sciences. 3 Hours**

Exploration of developments in Christian theology that have paralleled the rise of the human sciences, in particular of concepts of God, humanity, Church, sacraments, sin, and salvation in the light of history, anthropology, psychology, and sociology. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 376H. Theology & the Social Sciences. 3 Hours**

Exploration of developments in Christian theology that have paralleled the rise of the human sciences, in particular of concepts of God, humanity, Church, sacraments, sin, and salvation in the light of history, anthropology, psychology, and sociology. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 377. The Inner Journey in Myth, Bible & Literature. 3 Hours**

Study of stories of heroic figures in the Bible and in other literature as patterns of personal and spiritual development. Throughout, efforts to relate the material to the needs of contemporary persons. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 378. Rel,Soc,Global Cinema. 3 Hours**

This course introduces students to the post-World War II film movement of Italian neorealism and its influence in global cinema. It examines neorealism as a significant cinema of moral, religious and social thought that has influenced 20th and 21st-century global culture.

**REL 383. Philosophy of Religious Education. 3 Hours**

An attempt to construct a philosophy of religious education, various contemporary theoretical models, dimensions of teaching religion in a pluralistic society, the polarization generated. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 399. Readings in Religious Studies. 1-3 Hours**

Directed readings in a specific area of interest under the supervision of a staff member. May be taken more than once. By permission only. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 399H. Readings in Religious Studies. 1-3 Hours**

Directed readings in a specific area of interest under the supervision of a staff member. May be taken more than once. By permission only. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 425. Augustine. 3 Hours**

The life and work of Augustine of Hippo (354-430), a major theologian of Western Christianity. His influence is strongly felt in both Protestant and Catholic traditions in areas of sexual ethics, church-state relations, Trinitarian and sacramental theology. Prerequisite(s): REL 103.

**REL 429. Modern Catholicism. 3 Hours**

An examination of Modern Catholicism based on a close study of the context, process, decisions, implementation, and challenges of Vatican II in the Roman Catholic Church. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 437. Significance of Jesus. 3 Hours**

Emphasis on the identity of Jesus and on the significance that his ministry, death, and resurrection have for the salvation of humankind. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 440. The Church. 3 Hours**

Biblical and theological study of the meaning of the Church which explores the relationship between Christ and the Church, the various models for understanding the Church, and the mission of the Church. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 441. Theology of Mary. 3 Hours**

Study of the place of the Mother of God in the great truths of faith in the light of chapter eight of the Constitution on the Church. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 442. God & Atheism. 3 Hours**

Study of some recent contributions made by theology, philosophy, psychology, and the humanities to the current discussion of God's existence, nature, and relationship to humanity. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 443. The Sacraments. 3 Hours**

Study of the meaning of sacramentality. The sacraments in the context of Christ as the sacrament of the human encounter with God and in the context of the Church as the sacrament of Christ. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 444. God in Christian Tradition. 3 Hours**

Review of theologies of God in Christian tradition, from biblical through contemporary sources, especially as these theologies have affected overall Catholic thought and spirituality. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198); PHL 103.

**REL 446. Christian Liturgy. 3 Hours**

Study of the basic principles of liturgy, the development of some of the basic forms of liturgy, and applications of the principles within current rites. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 447. Selected Catholic Doctrines. 3-4 Hours**

Detailed study of several important current theological questions primarily from a Catholic systematic and historical perspective. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 449. Aquinas. 3 Hours**

Theology of Aquinas including: Trinity, human nature, providence, grace, virtue, Christ, and sacraments. Some attention given to historical context and contemporary interpretation, but the main focus will be reading and understanding the Summa. Prerequisite(s): REL 103.

**REL 471. Women & Religion. 3 Hours**

Examination of the impact of the women's movement on Judaism, Christianity, and other major world religions. Survey of traditional religious attitudes toward women. Relevance of feminist approaches to scripture, ethics, spirituality, and ministry in understanding contemporary global issues. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 472. Ecology & Religion. 3 Hours**

Examination of the relationship between religion and ecology; bridges the contributions of traditional theological inquiry and modern scientific insights and offers an enlarged vision of ecological concerns. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 474. Women & the Global Church. 3 Hours**

An exploration of the intersection between faith communities, traditional and non-traditional, and particular cultures in the lives of contemporary women. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 477H. Honors Thesis. 3 Hours**

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

**REL 478H. Honors Thesis. 3 Hours**

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

**REL 484. Practicum. 3 Hours**

Supervised in-service experience in an area of religious education chosen by the student. By permission only. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 485. Lay Ministry. 3 Hours**

Critical examination of lay ministry and its theological basis, in light of Vatican II and recent trends in the world and Church. Special topics: family ministry, ministry in the marketplace, leadership, evangelization, catechesis, women, social justice. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 487. Religious Education- Theory & Practice. 3 Hours**

Study of theory and practice of religious education for those who will be teaching religion in the school and parish. Various models and methods. Emphasis on process and religious education as developmental. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 488. Spirituality & Religious Education. 3 Hours**

Exploration of impact of liturgy and spirituality on contemporary models of religious education; study of interrelationship between faith experience and religious content; basic principles for developing practical programs. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 490. Capstone Seminar. 3 Hours**

Study of a particular topic in religion or theology that draws upon a variety of resources in the fields. This course provides an integrative academic experience. Topic varies from semester to semester. Required of all majors, open to minors. May be repeated. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198); junior or senior standing.

**REL 492. Special Topics. 1-3 Hours**

Concentrated study of issues and subjects pertinent to religion. May be repeated when topic changes. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

**REL 492H. Special Topics. 1-3 Hours**

Concentrated study of issues and subjects pertinent to religion. May be repeated when topic changes. Prerequisite(s): (ASI 110, 120 or equivalent) or (REL 103 or REL 198).

## Sociology, Anthropology, and Social Work

Major:

- Bachelor of Arts, Sociology (p. 274)

Minors:

- Sociology (p. 274)
- Anthropology (p. 274)
- Social Work (p. 274)

Sociology is the scientific study of all levels of society, that is, people in groups. The discipline's unique insight is that people are who they are largely because of their social experiences and interactions with others. "The sociological imagination" enables us to understand the relationship between our individual experiences and the broader social context, from the local to the global. Beyond various aspects of social behavior, sociologists study the nature and causes of social problems such as poverty, racism, family instability, and crime. Sociologists strive to apply their understanding in ever more constructive ways for the improvement of society and the common good.

Students intending to major or minor in sociology should consult with the department chairperson to plan their programs of courses. The requirements for majoring in sociology are stated in the outline below. Criminal justice studies is also one of the majors listed in this department. View CJS program requirements. (<http://catalog.udayton.edu/undergraduate/collegeofartsandsciences/programsofstudy/criminaljusticestudies>)

The minors in sociology, anthropology, and social work consist of 15 semester hours. The minor in criminal justice studies consists of 18 semester hours.

### Faculty

Leslie Picca, Chairperson

Professors: Curran, Davis-Berman, Donnelly, L. Majka, T. Majka

Associate Professors: Becker, Cassiman, Forbis, Jipson, Leming, Picca

Assistant Professors: Dasgupta, Holcomb, Longazel, Thompson-Miller

Lecturers: Gibbs, Kim, Litka



## Bachelor of Arts with a major in Sociology (soc) Minimum 124 Hours

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
HST 103 West and the World	
REL 103 Introduction to Religious and Theological Studies	
PHL 103 Intro To Philosophy	
ENG 100 Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>	0-3
ENG 200 Writing Seminar II	
Oral Communication	3
CMM 100 Principles of Oral Communication	
Mathematics	3
Social Science	3
Arts	3
Natural Sciences <sup>4</sup>	7
Crossing Boundaries	variable credit
Faith Traditions	
Practical Ethical Action	
Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

<b>Major Requirements</b> <sup>1</sup>	37
SOC 101 Principles of Sociology	3
or SOC 204 Modern Social Problems	
SOC 208 Social Research Methods	3
SOC 303 Modern Social Theory	3
SOC 308 Data Analysis	3
SOC 351 Urban Sociology	3
SOC 408 Senior Project Design	1
SOC 409 Senior Project (Satisfies CAP Major Capstone)	3
Select six SOC courses (May include CAP Components) <sup>2</sup>	18

## Minor in Anthropology (ant)

Anthropology is the study of people at all times and places. It emphasizes understanding total cultural systems. A minor in anthropology consists

of 15 semester hours. Students intending to minor in anthropology should consult with the department chairperson to plan their selection of courses.

### Anthropology

ANT 150 Cultural Anthropology	3
Select four ANT courses (300/400 level)	12
Total Hours	15

## Minor in Social Work (swk)

Social work is the profession sanctioned by society to provide social services. It is the professional activity of helping individuals, groups, or communities to enhance or restore their capacity for social functioning. The profession also engages in activities aimed at facilitating societal conditions that enhance and/or restore social functioning.

A minor in social work consists of 15 semester hours.

### Social Work <sup>1</sup>

Select fifteen SWK semester hours <sup>2</sup>	15
Total Hours	15

<sup>1</sup> No more than six semester hours of field experience credit can be accepted toward the minor. The field experience course requires students to take or have taken SWK 201, Social Work Practice.

<sup>2</sup> At least twelve semester hours at the 300/400 level.

## Minor in Sociology (soc)

### Sociology

Select fifteen SOC semester hours <sup>1</sup>	15
Total Hours	15

<sup>1</sup> At least twelve semester hours at the 300/400 level.

## Bachelor of Arts, Sociology

### First Year

Fall	Hours Spring	Hours
ASI 150	1 SOC elective	3
SOC 101	3 ENG 100 (CAP writing seminar)	3
HST 103 (CAP Humanities)	3 MTH 114 or 207	3
CMM 100 (CAP Communication)	3 REL 103 (CAP Humanities)	3
PHL 103 (CAP Humanities)	3 SCI 210 & 210L	4
SCI 190 & 190L	4	
	<b>17</b>	<b>16</b>

### Second Year

Fall	Hours Spring	Hours
SOC 351	3 SOC 308	3
SSC 200	3 SOC Elective	3
SOC 208	3 ENG 200	3
ANT 150	3 SCI 230	3

Language 101	4 Language 141	4
	<b>16</b>	<b>16</b>
<b>Third Year</b>		
<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
SOC 303	3 SOC elective	3
SOC elective	3 SOC elective	3
SOC elective	3 Inquiry	3
Arts Study	3 Diversity and Social Justice	3
Language 201 or Context	3 POL 101	3
	SOC 408	1
	<b>15</b>	<b>16</b>
<b>Fourth Year</b>		
<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
SOC 409	3 POL or ANT at 300 or 400 level	3
Faith Tradition	3 Advanced PHL or REL	3
Practical Ethical Action	3 Advanced HST	3
Integrative	3 Literature	3
Advanced REL or PHL	3 General elective	3
	<b>15</b>	<b>15</b>

Total credit hours: 126

## Anthropology Courses

### ANT 150. Cultural Anthropology. 3 Hours

Basic principles of cultural anthropology. Survey of human adaptation to and adjustment of the environment by means of culture; comparison of ways of life among peoples of the world for inferences toward understanding human behavior. Required for anthropology minors.

### ANT 150H. Cultural Anthropology. 3 Hours

Basic principles of cultural anthropology. Survey of human adaptation to and adjustment of the environment by means of culture; comparison of ways of life among peoples of the world for inferences toward understanding human behavior. Required for anthropology minors.

### ANT 300. Evolution of People & Culture. 3 Hours

Survey of human biological and cultural evolution from prehuman ancestors to settled city-states. Consideration of contemporary peoples at various levels of social complexity.

### ANT 306. Culture & Power. 3 Hours

Exploration of how culture and power are intertwined in the process of transformation of cultural beliefs and practices around the world. Focus on the ways in which anthropologists have studied modern state formation, and the attendant cultural politics, in local, regional, national, and international contexts. Prerequisite(s): ANT 150.

### ANT 310. Culture & Personality. 3 Hours

Survey of studies investigating the relationship between cultural environment and the individual. Material drawn from both literate and nonliterate societies.

### ANT 315. Language & Culture. 3 Hours

Introduction to the scientific study of language and its relationship to other aspects of human behavior.

### ANT 320. Anthropology of Childhoods. 3 Hours

Survey of anthropology research on issues related to children and childhood. Cross-cultural comparison of changing conceptions and varied experiences of the developmental stage known singularly as 'childhood', with a special emphasis on children as social agents and childhoods as lived experiences. Prerequisite(s): ANT 150.

### ANT 325. Anthropology of Human Rights. 3 Hours

An overview of anthropological approaches to human rights, weighing human rights universals against situations of cultural particularity. Prerequisite(s): ANT 150.

### ANT 335. Urban Anthropology. 3 Hours

Survey of anthropology research on urban issues. Considers how cities arose and how urban people make a living, organize, and think. Considers urban futures.

### ANT 336. Epidemics, Power & the Human Condition. 3 Hours

Epidemics, Power and the Human Condition.

### ANT 352. Cultures of Latin America. 3 Hours

Origin and development of ancient civilizations including the Aztec, the Maya, and the Inca. Survey of contemporary cultures, with special emphasis on peasant life.

### ANT 356. Cultures of Africa. 3 Hours

Examination of Africa through the lens of anthropology. Exploration of late colonial and postcolonial eras, with a focus on gender, kinship, ethnicity, politics, religion, and prospects for the future. Consideration of the production of knowledge about and dominant representations of Africa. Prerequisite(s): ANT 150.

### ANT 360. Cultures of South Asia. 3 Hours

Examination of South Asia through the lens of anthropology. Explores the postcolonial era, South Asia's dynamic religious traditions, the study of caste, 'Bollywood' and popular cultures, Hindu nationalism, and the South Asian diaspora in the West.

### ANT 368. Immigration & Immigrants. 3 Hours

Perspectives on immigration and ethnicity. Studies of social and economic adaptation of new immigrants and the second generation in communities, cities, and societies. Ethnic change, conflict, and contemporary national and international issues, with an emphasis on human rights. (Same as SOC 368.) Prerequisite(s): (SOC 101 or SOC 204) or ANT 150.

### ANT 368H. Immigration & Immigrants. 3 Hours

Perspectives on immigration and ethnicity. Studies of social and economic adaptation of new immigrants and the second generation in communities, cities, and societies. Ethnic change, conflict, and contemporary national and international issues, with an emphasis on human rights. (Same as SOC 368.) Prerequisite(s): (SOC 101 or SOC 204) or ANT 150.

### ANT 392. Special Topics in Anthropology. 1-6 Hours

Intensive examination of current thematic, theoretical, or methodological issues from the viewpoint of anthropology. May be repeated as topics change. Prerequisite(s): ANT 150; permission of instructor.

### ANT 392H. Special Topics in Anthropology. 1-6 Hours

Intensive examination of current thematic, theoretical, or methodological issues from the viewpoint of anthropology. May be repeated as topics change. Prerequisite(s): ANT 150; permission of instructor.

### ANT 449. Anthropological Field Work. 1-6 Hours

Formulation and carrying out of a research design in archaeology, physical anthropology, linguistics, or cultural anthropology. Prerequisite(s): Permission of instructor.

**ANT 477H. Honors Thesis. 3 Hours**

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

**ANT 478H. Honors Thesis. 3 Hours**

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

**ANT 497. Service Learning Experience. 1 Hour**

Supervised community research or service experience that complements a specific upper division course in Anthropology. Repeatable up to three semester hours. Prerequisite(s): Permission of instructor. Corequisite(s): A 300-400 level Anthropology course.

**ANT 498. Independent Study. 1-6 Hours**

Research problems or readings of special interest investigated under the guidance of an anthropology staff member. Prerequisite(s): Permission of department chairperson.

## Social Work Courses

**SWK 201. Social Work Practice & Profession. 3 Hours**

Study of the historical and theoretical underpinnings of the social work profession. Study of social work practice theory and technique.

**SWK 303. Community Practice & Research. 3 Hours**

Study of the design and implementation of community research, including needs assessment and program evaluation in the social service system. (Same as SOC 309.) Prerequisite(s): SOC 101 or SOC 204; permission of instructor.

**SWK 305. Social Services in the Health Field. 3 Hours**

The role of social services in health care facilities and governmental health programs. U.S. health care policies and programs; methods of social work intervention in medical settings.

**SWK 307. Mental Health Services. 3 Hours**

Study of historical perspectives, deinstitutionalization, the community mental health movement, inpatient care, and innovative approaches. Policy and practice implications are examined. This course is normally taken in the Junior or Senior year.

**SWK 310. Law & Human Services. 3 Hours**

Orientation to the legal system as it affects the provision of human services and the profession; social legislation and court decisions as they affect child welfare, public assistance, mental health, housing, and probation and parole services.

**SWK 325. Child Abuse. 3 Hours**

Comprehensive study of child abuse: its history, scope, causal factors, indicators for detection, treatment resources and modalities, and community responsibility.

**SWK 327. Parenting: Social Welfare Role. 3 Hours**

Comprehensive study of historical and contemporary perspectives on parenting, future of parenting (assessing trends and choices in family structure and function), cross-cultural comparisons, policy and legal aspects of parenting, societal influences on parenting.

**SWK 330. Perspectives on Aging. 3 Hours**

An introduction to the field of gerontology. Focus on the major physical, psychological, and social dynamics of aging. Selected issues will be highlighted. This course is normally taken in the Junior or Senior year (Same as SOC 330.).

**SWK 331. Death, Dying and Suicide. 3 Hours**

Applied study of the phenomena of death and dying. The role and responsibility of the professional in working with the dying and their survivors. Study of suicide in contemporary U.S. society. This course is normally taken in the Junior or Senior year.

**SWK 335. Social Work & Environmental Justice. 3 Hours**

Study of the impact of environmental degradation upon individuals and communities and the role of social work in advocating for environmental justice. Topics include health, disasters, environmental degradation, human rights, and advocacy.

**SWK 360. International Social Work. 3 Hours**

Study of the role of social workers in international contexts. Topics include migration, globalization, development, conflict, and the ethical implications of social workers practicing internationally.

**SWK 370. Social Welfare Policy. 3 Hours**

Study of U.S. social welfare policy and its impact upon populations of interest to social workers and other helping professionals. Topics include history of social welfare policy, ideologies that inform social welfare policy, attention to the gendered nature of social policy, international social welfare policy, contemporary policy debates and the role of social workers and allies in the policy arena.

**SWK 392. Special Topics. 1-3 Hours**

Exploration of special topics related to the field of human services. Assessment of appropriate literature and research. May be repeated as topics change.

**SWK 401. Community Field Experience. 5 Hours**

Supervised field experience for students working in a micro or macro practice setting. Concurrent seminar includes intensive basic communication and interviewing skill development. Students spend 150 hours in the agency. Prerequisite(s): SWK 201; permission of instructor.

**SWK 465. Independent Study. 1-3 Hours**

Individual research, study, and readings on specific topics and/or projects of importance to social work. Under individual faculty direction. Prerequisite(s): Permission of instructor.

**SWK 477H. Honors Thesis. 3 Hours**

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with department chairpersons. Prerequisite(s): Approval of University Honors Program.

**SWK 478H. Honors Thesis. 3 Hours**

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

**SWK 497. Service Learning Experience. 1 Hour**

Supervised community research or service experience that complements a specific upper division course in Social Work. Repeatable up to three semester hours. Prerequisite(s): Permission of instructor. Corequisite(s): A 300-400 level Social Work course.

## Sociology Courses

**SOC 101. Principles of Sociology. 3 Hours**

Study of social groups, social processes, and society; the individual's relationship to society, social structure, social inequality, ethnic minorities, cities and human populations, and social institutions such as the family, education, religion, and government.

**SOC 101H. Principles of Sociology. 3 Hours**

Study of social groups, social processes, and society; the individual's relationship to society, social structure, social inequality, ethnic minorities, cities and human populations, and social institutions such as the family, education, religion, and government.

**SOC 204. Modern Social Problems. 3 Hours**

Course to familiarize nonsociology majors with contemporary problems in society; historical development, current status, and analysis of problems, using modern social theories. Content may vary from section to section.

**SOC 204H. Modern Social Problems. 3 Hours**

Course to familiarize nonsociology majors with contemporary problems in society; historical development, current status, and analysis of problems, using modern social theories. Content may vary from section to section.

**SOC 208. Social Research Methods. 3 Hours**

Study of the logic of research design, data-gathering strategies, types of measurement, and sampling techniques. Both inductive and deductive approaches. Participation in research projects. Prerequisite(s): SOC 101 or SOC 204.

**SOC 303. Modern Social Theory. 3 Hours**

Consideration of the works of modern theorists and major trends in the history of social thought. Prerequisite(s): SOC 101 or SOC 204.

**SOC 305. Criminological Theory. 3 Hours**

Study of the major theories of crime; consideration of the implications of theory for the criminal justice system. Prerequisite(s): SOC 101 or SOC 204.

**SOC 305H. Criminological Theory. 3 Hours**

Study of the major theories of crime; consideration of the implications of theory for the criminal justice system. Prerequisite(s): SOC 101 or SOC 204.

**SOC 308. Data Analysis. 3 Hours**

The analysis and interpretation of both quantitative and qualitative social science data. Prerequisite(s): SOC 208. Corequisite(s): SOC 308L.

**SOC 308L. Data Analysis Laboratory. 1 Hour**

Training in appropriate computer programs and computer analysis of social science data. Prerequisite(s): SOC 208. Corequisite(s): SOC 308.

**SOC 309. Community Practice & Research. 3 Hours**

Study of the design and implementation of community research, including needs assessment and program evaluation in the social service system. (Same as SWK 303.) Prerequisite(s): SOC 101 or SOC 204; permission of instructor.

**SOC 310. Perspectives on Education & Social Justice. 3 Hours**

Exploration of research paradigms representing the different disciplines in relation to current educational issues from a social justice perspective. The educational issues will be critically explored from diverse perspectives or domains, and the skills learned will be transferable to the multiple disciplines. The primary student learning outcome (SLO) for the course will be: practical wisdom, as the students will address real problems/issues in P-12 education, drawing upon the knowledge, values and skills embedded within their specific discipline.

**SOC 321. The Sociology of Work & Occupations. 3 Hours**

Survey of the major features of work and occupations in industrial society. The meaning of work, occupational choice and recruitment, occupational socialization, career patterns, and occupational rewards. Unemployment, underemployment, sex-typing, automation and alienation.

**SOC 322. Sex Roles & Society. 3 Hours**

Research findings and major analytical approaches to study social and cultural influences on the development of personal sexual identity and relationships between men and women. Major social issues concerning human sexuality.

**SOC 323. Juvenile Justice. 3 Hours**

The environmental and internal factors that influence or determine delinquent behavior; roles of individual juvenile offenders, parents or guardians, school, church, police, business community, community agencies, and the juvenile justice and correctional system in preventing and treating delinquent behavior. Prerequisite(s): SOC 101 or SOC 204.

**SOC 325. Deviant Behavior. 3 Hours**

Description of various types of deviant behavior; for example, mental illness, alcoholism, drug addiction, the professional criminal. Study of explanations for the consequences and the role of deviant behavior in modern society. Prerequisite(s): SOC 101 or SOC 204.

**SOC 326. Law & Society. 3 Hours**

Study of the legal system and practices from a sociological point of view; the historical origin and role of the law in society, issues relating to the law as an instrument of social control and/or social change; analysis of the legal profession.

**SOC 326H. Law & Society. 3 Hours**

Study of the legal system and practices from a sociological point of view; the historical origin and role of the law in society, issues relating to the law as an instrument of social control and/or social change; analysis of the legal profession.

**SOC 327. Criminology. 3 Hours**

Social and cultural nature, origin, and development of law; criminal behavior; crime control. The influence of society in the creation and organization of legal and crime control systems. Biological, psychological, and sociological factors leading to criminal behavior. Prerequisite(s): SOC 101 or SOC 204.

**SOC 328. Racial & Ethnic Relations. 3 Hours**

Study of the historical and contemporary experiences of racial and ethnic groups in the United States and globally. Examines how racial and ethnic relations function in the political, social, legal, and economic systems, and how this impacts privilege, oppression, and resistance.



**SOC 328H. Racial & Ethnic Relations. 3 Hours**

Study of the historical and contemporary experiences of racial and ethnic groups in the United States and globally. Examines how racial and ethnic relations function in the political, social, legal, and economic systems, and how this impacts privilege, oppression, and resistance.

**SOC 330. Perspectives on Aging. 3 Hours**

An introduction to the field of gerontology. Focus on the major physical, psychological, and social dynamics of aging. Selected issues will be highlighted. (Same as SWK 330.).

**SOC 331. Marriage & the Family. 3 Hours**

Historical, cross-cultural, and current study of social relationships during dating and courtship, interpersonal communication in marriage and family life, sexuality in marriage, adjustments in parenthood, divorce and remarriage, alternatives to traditional marriage, and the future of marriage and family life.

**SOC 331H. Marriage & the Family. 3 Hours**

Historical, cross-cultural, and current study of social relationships during dating and courtship, interpersonal communication in marriage and family life, sexuality in marriage, adjustments in parenthood, divorce and remarriage, alternatives to traditional marriage, and the future of marriage and family life.

**SOC 332. Sociology of Women. 3 Hours**

Cross-societal analysis of the position of women, with emphasis on industrialized and developing societies. The social positions of women and men in the family, work, politics, and the legal system. Consideration of theories of the biological, psychological, and sociological bases for the behavior and characteristics of women in the context of societal institutions.

**SOC 333. Sociology of Sexualities. 3 Hours**

Examination of theoretical and conceptual issues, empirical research and social policies germane to the sociological study of human sexuality. Topics include: sexual identity and orientation; sexuality throughout the life-course; sexual assault and coercive sexuality; social control of sexuality; social locations (race, class, and gender) and sexuality; and the relationship between sexuality and the socio-political process. Prerequisite(s): SOC 101 or SOC 204.

**SOC 334. Religion & Society. 3 Hours**

Definitions of religion and its role in society. Traditional and nontraditional expressions of religious life from the viewpoint of society. Varieties of religious experience and the interrelations between religious phenomena and other social institutions and societal behavior. Prerequisite(s): SOC 101 or SOC 204.

**SOC 336. Organizations in Modern Society. 3 Hours**

Analysis of the dynamics of organizations in modern industrial society. Organizational social psychology, organizational structure and process, and organization-community relations. Prerequisite(s): SOC 101 or SOC 204.

**SOC 337. Political Sociology. 3 Hours**

Study of political power. Political influence by economic elites, impact of bureaucracies, competing ideologies, alienation and nonvoting, and social movements as challenges to power structures. Prerequisite(s): SOC 101 or SOC 204.

**SOC 339. Social Inequality. 3 Hours**

Study of social inequality in society. Emphasis on the processes that divide people into unequal groups based on wealth, status, and power. The effects of inequality on individual life chances and life styles.

**SOC 339H. Social Inequality. 3 Hours**

Study of social inequality in society. Emphasis on the processes that divide people into unequal groups based on wealth, status, and power. The effects of inequality on individual life chances and life styles.

**SOC 340. Social Psychology in Society. 3 Hours**

Survey of the basic principles, concepts, theories, and methods of social psychology from the sociological perspective. Prerequisite(s): SOC 101 or SOC 204.

**SOC 341. Self & Society. 3 Hours**

Study of the relationship between self and others. Socialization, self conceptions, deviant behavior, social influence, and social control.

**SOC 341H. Self & Society. 3 Hours**

Study of the relationship between self and others. Socialization, self conceptions, deviant behavior, social influence, and social control.

**SOC 342. Collective Behavior. 3 Hours**

Study of social protest, crowds, social movements, revolution, fads, fashion, public opinion processes, propaganda, and political and social responses to these phenomena. Prerequisite(s): SOC 101 or SOC 204.

**SOC 343. Mass Communication in Modern Society. 3 Hours**

Social-psychological analysis of the structure and processes of mass communication related to advertising, patterns of social behavior, social change, propaganda, censorship, media control, and social institutions.

**SOC 344. Interaction Processes. 3 Hours**

Study of the interaction processes of social life. Bargaining and negotiation, cooperation, social influence, solidarity, competition, and conflict. Prerequisite(s): SOC 101 or SOC 204.

**SOC 345. Sociology of Extremism. 3 Hours**

Study of the social understanding and social construction of identity, otherness, difference, and extremism in such cases as the development of white racial extremism in the United States. Prerequisite(s): SOC 101 or SOC 204.

**SOC 348. Crime, Film & Society. 3 Hours**

This course will examine the portrayal of crime and justice in feature length films and how these films influence how our society views issues related to crime. The primary focus will be on the American criminal justice system (law enforcement, courts, and corrections) and the broader topic of justice. Prerequisite(s): (SOC 101 or SOC 204) or CJS 101 or permission of instructor.

**SOC 351. Urban Sociology. 3 Hours**

The study of the development of urban life from ancient times to the present, with an emphasis on contemporary urban population characteristics, social-economic-political structure, and problems. Prerequisite(s): SOC 101 or SOC 204.

**SOC 352. Community. 3 Hours**

Study of the interaction of groups and individuals related by common situations, problems and intentions; creation, maintenance, eclipse, and restoration of close social ties in urban neighborhoods, small towns, and groups with similar interests and lifestyles.

**SOC 353. Internet Community. 3 Hours**

No description available.

**SOC 354. Perspective on Childhood. 3 Hours**

No description available.

**SOC 355. Families & the Economy. 3 Hours**

The relationship between families and their socio-economic environment. Consideration of public issues including family policy and government programs to assist families. Prerequisite(s): SOC 101 or SOC 204.

**SOC 360. Sport and Bodies. 3 Hours**

The purpose of this course is to critically examine the ways in which the human (athletic) body is altered/modified, displayed/portrayed, and valued in terms of gender, race, social class, and disability. This course will address the "nature" and the "nurture" of sports and bodies. The course will examine how bodies are constructed, not just by nature, but by society as well.

**SOC 368. Immigration & Immigrants. 3 Hours**

Perspectives on immigration and ethnicity. Studies of social and economic adaptation of new immigrants and the second generation in communities, cities, and societies. Ethnic change, conflict, and contemporary national and international issues, with an emphasis on human rights. (Same as ANT 368.) Prerequisite(s): (SOC 101 or SOC 204) or ANT 150.

**SOC 371. Sociology of Human Rights. 3 Hours**

Examination of theories, research, and social policies pertinent to the sociological study of human rights. Topics include: progress and challenges in the evolution and application of human rights norms; global stratification, poverty and human development; social locations (race, class, gender, and age) and human rights; the relationship between human rights and development; and social movements and human rights promotion. Prerequisite(s): (SOC 101 or SOC 204) or permission of instructor.

**SOC 392. Selected Topics in Sociology. 1-6 Hours**

Examination of a current topic of general interest in sociology. Majors and nonmajors may enroll. Consult composite for topics. May be repeated as topic changes. Prerequisite(s): SOC 101 or SOC 204.

**SOC 394. Popular Culture in Society. 3 Hours**

Introduction to an understanding of the collective behavior and structured activities of the popular culture and entertainment industry, the nature of musical choice, television, radio, Internet, genres and styles, distribution, performance, and the social construction of culture from a sociological perspective. Prerequisite(s): SOC 101 or SOC 204.

**SOC 398. Social Science Scholars' Seminar. 3 Hours**

Study and seminar discussion of selected sociological writings and the analysis, interpretation and criticism of these works. Open only to students in the Berry Scholars Program. Prerequisite(s): ENG 198; HST 198.

**SOC 408. Senior Project Design. 1 Hour**

Preparation for sociology capstone course with a focus on a workable research topic, literature review, and research methods design. Required for Sociology majors. Prerequisite(s): SOC 303, SOC 308.

**SOC 409. Senior Project. 3 Hours**

Capstone experience for sociology majors consisting of a seminar on research and writing in sociology, an empirical research project of the student's choosing, and a written and oral presentation of the research. Prerequisite(s): SOC 408.

**SOC 410. Victimology. 3 Hours**

The study of victimization including the relationships between victims and offenders, the interactions of victims and the criminal justice system and other social groups and institutions. Prerequisite(s): SOC 101 or SOC 204; 12 hours of course work in the social sciences.

**SOC 426. Leadership in Building Communities. 3 Hours**

Investigation of the processes by which urban neighborhoods develop themselves from the inside out. Students cultivate their own interdisciplinary appreciation of urban communities through extensive interaction with one neighborhood's visioning process. Topics include asset-based community development, social capital, citizenship, adaptive leadership, and community building strategies and tools. Same as POL 426. Prerequisite(s): Junior standing.

**SOC 426H. Leadership in Building Communities. 3 Hours**

Investigation of the processes by which urban neighborhoods develop themselves from the inside out. Students cultivate their own interdisciplinary appreciation of urban communities through extensive interaction with one neighborhood's visioning process. Topics include asset-based community development, social capital, citizenship, adaptive leadership, and community building strategies and tools. Same as POL 426. Prerequisite(s): Junior standing.

**SOC 432. Structure of Privilege. 3 Hours**

Study of the theoretical and conceptual issues, empirical research, and social policies germane to the sociological analysis of privilege. Topics include whiteness, men and masculinities, class-privilege, heterosexuality and heterosexism, and intersectionality. Prerequisite(s): SOC 101 or SOC 204.

**SOC 435. Economy & Society. 3 Hours**

Sociological analysis of modern economic institutions, with an emphasis on classical themes. Topics include capitalism, industrialism and social consequences of contemporary economic trends. Empirical research will be required. Prerequisite(s): SOC 101 or SOC 204; permission of instructor.

**SOC 437. Marx & Sociology. 3 Hours**

Study of Marx's writings on topics relevant to the social sciences. Comparison of contemporary Marxian scholarship in such areas as social inequality, political structures, urban change, ideology and consciousness, and models for the future. Prerequisite(s): SOC 101 or SOC 204; junior or senior standing.

**SOC 438. Urban Poverty. 3 Hours**

Study of the social factors that contribute to poverty in cities. Consideration of the social effects of government and other programs to alleviate poverty. Prerequisite(s): SOC 101 or 204.

**SOC 477H. Honors Thesis. 3 Hours**

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

**SOC 478H. Honors Thesis. 3 Hours**

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

**SOC 492. Special Topics in Sociology. 1-6 Hours**

Intensive examination of current theoretical or methodological issues; faculty-advised research project or library work. Consult composite for topics. May be repeated as topic changes. Prerequisite(s): SOC 101 or SOC 204; permission of instructor.

**SOC 495. Sociology Internship. 1-6 Hours**

Supervised work experience related to course work in sociology in appropriate government, social service, and private organizations. May be repeated to a maximum of six semester hours. Prerequisite(s): Permission of department chairperson.

**SOC 497. Service Learning Experience. 1 Hour**

Supervised community research or service experience that complements a specific upper division course in Sociology. Repeatable up to three semester hours. Prerequisite(s): Permission of instructor. Corequisite(s): A 300-400 level Sociology course.

**SOC 498. Independent Study. 1-6 Hours**

Research or special readings on problems of interest to the student under the guidance of sociology staff member. Prerequisite(s): Permission of department chairperson.

## Sustainability, Energy and Environment

The minor in Sustainability, Energy and the Environment (SEE) is a multidisciplinary effort to encourage students to explore complex societal sustainability issues that do not fit easily into one traditional academic discipline. The genesis of this program lies in the realization that a scientific and technical knowledge of environmental, ecological and energy system challenges will not be sufficient to develop viable answers. Many disciplines at the University make contributions to these issues, ranging from ethical, spiritual and artistic, to economic, political and sociological approaches. Students will be introduced to the minor through a seminar-style course, will take at a minimum two further team-taught and interdisciplinary courses, and will gain experience in interdisciplinary research.

Students desiring to minor in sustainability, energy and environment should notify the coordinator of sustainability, energy and environment.

**Sustainability, Energy and Environment Advisory Committee**

Robert Brecha (Physics), Coordinator  
Bednarek (History), Bohrer (Fitz Center), Cuy Castellanos (Dietetics), Fouke (Philosophy), Hallinan (Mechanical Engineering), Hoffmann (Facilities Management), Jablonski (Marianist Environmental Education Center and Religious Studies), Jennings (Art and Design), King (Rivers Institute), McEwan (Biology), Pautz (Political Science), Potter (English), Wu (Geology)

## Minor in Sustainability, Energy and Environment (see)

**Sustainability, Energy and Environment <sup>1</sup>**

SEE 250	Introduction to Sustainability, Energy & the Environment	3
SEE Core		6-9
Select one or two courses (3-6 hours) from:		
ASI 320	Cities & Energy	
ASI 322	Cities & Suburbs: The Influence of Place (Social Science)	

or ASI 323	Cities & Suburbs: The Influence of Place (Philosophy)
or ASI 324	Cities & Suburbs: The Influence of Place (Religious Studies)
SEE 303	Constructions of Place

Select no more than one course (0-3 hours) from: <sup>2</sup>

SEE 301	Global Change & Earth Systems
BIO 359	Sustainability & the Biosphere
BIO 395	Global Environmental Biology
GEO 208	Environmental Geology
CHM/GEO 234	Energy Resources

SEE Depth 6-9

(one course with experiential or research component) <sup>3</sup>

SEE 401 & SEE 402	Sustainability Research I and Sustainability Research II (SEE Depth Courses)
SEE 477 & SEE 478	Sustainability, Energy & Environment Honors Thesis Project and Sustainability, Energy & Environment Honors Thesis Project
ASI 345	Special Topics in Social Science
ECO 435	Economics of the Environment
ENG 342	Literature and the Environment
HST 342	Environmental History of the Americas
PHL 321	Environmental Ethics ,Environmental Ethics
PHL 334	Philosophy & Ecology
POL 371	Environmental Policy
REL 472	Ecology & Religion
SWK 335	Social Work & Environmental Justice

Total Hours 18

- Students who wish to minor in Sustainability, Energy and Environment should contact the coordinator of the Sustainability, Energy and Environment minor.
- Students with a major not otherwise requiring a biology course must complete either SEE 301 (with its prerequisite) or BIO 359 or BIO 395.
- Additional courses may be approved by SEE coordinator.

## Courses

**SEE 250. Introduction to Sustainability, Energy & the Environment. 3 Hours**

A multidisciplinary introduction to Sustainability, Energy and the Environment (SEE) and to the SEE minor. Emphasis on learning how to view complex issues from different disciplinary points of view, developing reading and critical thinking skills about current issues in sustainability, gaining an awareness of different ethical positions and how these influence the quest for solutions, and learning how scientific and sociopolitical processes work to investigate and address sustainability issues.

**SEE 301. Global Change & Earth Systems. 3 Hours**

Multidisciplinary introduction to the science of the earth system. Focus is on the interrelatedness of geological, biological, chemical and physical processes, and on methods used to understand both the past natural history and potential future scenarios for change in the earth system. Corequisite(s): BIO 101, SCI 230, or equivalent.

**SEE 301H. Global Change & Earth Systems. 3 Hours**

Multidisciplinary introduction to the science of the earth system. Focus is on the interrelatedness of geological, biological, chemical and physical processes, and on methods used to understand both the past natural history and potential future scenarios for change in the earth system. Corequisite(s): BIO 101, SCI 230, or equivalent.

**SEE 303. Constructions of Place. 3 Hours**

Multidisciplinary, arts-based course that explores the complex connections between our sense of place and the physical and environmental conditions that influence landscapes and communities.

**SEE 303H. Constructions of Place. 3 Hours**

Multidisciplinary, arts-based course that explores the complex connections between our sense of place and the physical and environmental conditions that influence landscapes and communities.

**SEE 401. Sustainability Research I. 3 Hours**

Interdisciplinary exploration of the issues of sustainability. The scientific, moral, spiritual, social, political, historical, ethical and economic dimensions of sustainability will be explored. Exploration of the foundations of ethical theory and their application to environmental issues. Students will pursue a research project with the primary focus on sustainability on campus. Prerequisite(s): PHL 103 or ASI 112 or ASI 120; completion of General Education Natural Science or CAP Natural Science Requirements: junior or senior standing.

**SEE 401H. Sustainability Research I. 3 Hours**

Interdisciplinary exploration of the issues of sustainability. The scientific, moral, spiritual, social, political, historical, ethical and economic dimensions of sustainability will be explored. Exploration of the foundations of ethical theory and their application to environmental issues. Students will pursue a research project with the primary focus on sustainability on campus. Prerequisite(s): PHL 103 or ASI 112 or ASI 120; completion of General Education Natural Science or CAP Natural Science Requirements: junior or senior standing.

**SEE 402. Sustainability Research II. 3 Hours**

An interdisciplinary exploration of the issues of sustainability as they affect the Dayton community. Course will also explore political philosophy and the ethical foundations of public policy. Students will choose an in-depth community-based research project. Prerequisite(s): PHL 103 or ASI 112 or ASI 120; completion of General Education Natural Science or CAP Natural Science Requirements; junior or senior standing.

**SEE 402H. Sustainability Research II. 3 Hours**

An interdisciplinary exploration of the issues of sustainability as they affect the Dayton community. Course will also explore political philosophy and the ethical foundations of public policy. Students will choose an in-depth community-based research project. Prerequisite(s): PHL 103 or ASI 112 or ASI 120; completion of General Education Natural Science or CAP Natural Science Requirements; junior or senior standing.

**SEE 477. Sustainability, Energy & Environment Honors Thesis Project. 3 Hours**

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with department chairpersons. Prerequisite(s): Approval of University Honors Program.

**SEE 477H. Honors Thesis. 3 Hours**

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with department chairpersons. Prerequisite(s): Approval of University Honors Program.

**SEE 478. Sustainability, Energy & Environment Honors Thesis Project. 3 Hours**

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

**SEE 478H. Honors Thesis. 3 Hours**

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

## Theatre

Major:

- Bachelor of Arts, Theatre (p. 282)

Minor:

- Theatre (p. 282)

A major in Theatre (THR), offered by the Department of Communication, provides an academic foundation plus the experience of working in a wide range of theatre productions, including mainstage productions in the Boll Theatre as well as experimental work in the Studio Theatre.

Theatre majors are required to audition for roles and participate in each mainstage production, for which they receive credit in THR 100 or THR 300.

A minor in theatre consists of 21 semester hours. Courses in dance are not included.

The Department of Communication also offers a concentration in Theatre (CTR (p. 146)).

### Faculty

Jonathan A. Hess, Chairperson, Department of Communication  
Michelle Hayford, Program Director  
Professor Emeritus: Gilvary  
Associate Professor: Anderson, Hayford  
Assistant Professor: Dunlevy  
Lecturer: Beran, Evans



## Bachelor of Arts with a major in Theatre (thr) Minimum 124 Hours

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
HST 103 West and the World	
REL 103 Introduction to Religious and Theological Studies	
PHL 103 Intro To Philosophy	
ENG 100 Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>	0-3
ENG 200 Writing Seminar II	
Oral Communication	3
CMM 100 Principles of Oral Communication	
Mathematics	3
Social Science	3
Arts	3
Natural Sciences <sup>4</sup>	7
Crossing Boundaries	variable credit
Faith Traditions	
Practical Ethical Action	
Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

<b>Major Requirements</b>	<b>38</b>
THR 105 Introduction to Theatre (Satisfies CAP Arts)	3
THR 305 Theatre Stagecraft	3
or THR 307 Theatre Lighting	
THR 310 Acting I	3
THR 325 Theory & Criticism of the Stage I	3
or THR 326 Theory & Criticism of the Stage II	
THR 330 Concepts of Scene Design	3
THR 340 The Director in the Theatre	3
THR 415 History of the Theatre I	3
or THR 425 History of Theatre II	
Select one from: (Satisfies CAP Major Capstone)	3
THR 440 Problems in Theatre II	
THR 490 Special Problems in Theatre	
THR Laboratories <sup>1</sup>	4

THR 100 Theatre Laboratory

THR 300 Theatre Laboratory

THR electives <sup>2</sup> 10

## Minor in Theatre (thr)

### Theatre

THR 105 Introduction to Theatre	3
THR 415 History of the Theatre I	3
or THR 425 History of Theatre II	
Select fifteen THR semester hours <sup>1</sup>	15
Total Hours	21

<sup>1</sup> Nine semester hours must be at the 300/400 level. Elected coursework in dance within the minor is limited to one two-semester hour course. Coursework in THR 100 and/or THR 300 is limited to a maximum of three semester hours within the minor.

### First Year

Fall	Hours Spring	Hours
ASI 150	1 ENG 100 (CAP Writing Seminar)	3
CMM 100 (CAP Communication)	3 HST 103, PHL 103, or REL 103 (CAP Humanities)	3
HST 103, PHL 103, or REL 103 (CAP Humanities)	3 THR 310	3
HST 103, PHL 103, or REL 103 (CAP Humanities)	3 Language	4
THR 105 Language	3 MTH (CAP Mathematics)	3
	4	
	<b>17</b>	<b>16</b>

### Second Year

Fall	Hours Spring	Hours
ENG 200	3 SSC 200 (satisfies CAP Social Science)	3
THR 330	3 THR elective	3
THR Elective	3 INSS (CAP Natural Science)	4
INSS (CAP Natural Science)	4 General elective	3
Language	3 General elective	2
	<b>16</b>	<b>15</b>

### Third Year

Fall	Hours Spring	Hours
THR 100 or THR 300	1 THR 100 or THR 300	1
THR 305 or 307	3 THR 340	3
THR 325 or 326	3 THR 415 or 425	3
INSS (CAP Inquiry)	3 Adv HST	3
Literature	3 Social Science	3
Social Science	3 General elective	3
	<b>16</b>	<b>16</b>

### Fourth Year

Fall	Hours Spring	Hours
THR 100 or THR 300	1 THR 100 or THR 300	1
THR elective	1 THR 440 or 490 (Capstone)	3
Adv PHL/REL (PEA/FT)	3 THR elective	3

CAP Integrative	3 Adv PHL/REL (PEA/FT)	3
Social Science	3 Diversity and Social Justice	3
General elective	3 General elective	1
	<b>14</b>	<b>14</b>

Total credit hours: 124

## Courses

### THR 100. Theatre Laboratory. 1-3 Hours

Credit allowance for role playing and/or play production in mainstage productions. Fifty hours of work minimum for one semester hour of credit. Repeatable up to three semester hours in first and second years. All registration retroactive. No advance registration.

### THR 105. Introduction to Theatre. 3 Hours

Analysis of the nature of theatre, its origin and development from the standpoint of the play, the physical theatre, and its place in our culture. Required of all majors. Open to all University students.

### THR 105H. Introduction to Theatre. 3 Hours

Analysis of the nature of theatre, its origin and development from the standpoint of the play, the physical theatre, and its place in our culture. Required of all majors. Open to all University students.

### THR 201. Basic Dance for the Performing Artist. 2-3 Hours

Beginning course in movement introducing the basic principles of dance and performance technique. Open to all University students.

### THR 202. Stage Makeup. 2 Hours

The basic principles of the art and technique of makeup so that the student may use them in design and execution to develop and project the character. Open to all University students.

### THR 203. Technical Production. 3 Hours

Introductory survey of scene design, construction, painting, and lighting. Current theory will be examined along with practical applications and techniques.

### THR 206. Stage Management. 2 Hours

Study of methods and standards of stage management in the theatre. Emphasis on organizational and management practices common to most theatres. Development of skills in applying methods of stage management.

### THR 251. Beginning Tap Dance. 2 Hours

Beginning course in the theory and practice of tap dance.

### THR 261. Beginning Jazz Dance. 2-3 Hours

Beginning course in the theory and practice of jazz dance.

### THR 271. Beginning Ballet. 2-3 Hours

Beginning course in the theory and practice of classical ballet technique.

### THR 300. Theatre Laboratory. 1-3 Hours

The third and fourth-year level of credit allowance for role playing and/or play production. Requirements and registration same as for THR 100.

### THR 301. Intermediate Dance for the Performing Artist. 2 Hours

Intermediate-level course in movement for students interested in further developing dance and performance technique. Prerequisite(s): Permission of department chairperson.

### THR 303. Scene Painting. 3 Hours

Basic principles of color paint theory and materials. Investigation of various scene-painting techniques. One three-hour class meeting weekly. Prerequisite(s): Permission of department chairperson.

### THR 305. Theatre Stagecraft. 3 Hours

Study and application of scene construction, rigging, backstage organization, production analysis, and technician-designer relationship.

### THR 307. Theatre Lighting. 3 Hours

Study and application of lighting for the stage: instruments, controls, sources, elements of electricity, and lighting design for all types of theatres, as well as graphic representation.

### THR 310. Acting I. 3 Hours

The study and practice of basic techniques in rehearsal and performance. Emphasis on self-analysis and self-awareness. Development of basic skills in vocal, emotional, and mental interpretation of character. Required of all theatre majors.

### THR 312. Film & Television Acting. 3 Hours

The study and practice of basic techniques of acting for film and television. Emphasis on technical requirements of acting for the camera and the control of body and voice actors must exercise in these media. Prerequisite(s): THR 310.

### THR 320. Movement & Voice for the Stage. 3 Hours

An integrated approach to the study of stage movement and voice production for the theatre.

### THR 322. Philosophy and Theatre/Dance: Performing Human Identity. 3 Hours

An interdisciplinary and advanced philosophy course with two components: 1) theoretical, focusing on the philosophy of dance or theatre and the philosophy of human identity, and 2) dance or theatre, where students will learn to use dance or theatre to express personal identity. Prerequisite(s): PHL 103.

### THR 323. Acting II. 3 Hours

Further study and practice of techniques introduced in Acting I. Emphasis on interaction, ensemble, group processes, and scene study. Prerequisite(s): (THR 105, 310) or permission of department chairperson.

### THR 325. Theory & Criticism of the Stage I. 3 Hours

Survey of representative plays from classical to neo-classical periods as a basis for theatrical production and dramatic criticism. THR 325 or 326 required of all THR majors. Prerequisite(s): THR 105.

### THR 326. Theory & Criticism of the Stage II. 3 Hours

Continuation of THR 325 from romantic to modern periods. Prerequisite(s): THR 105.

### THR 330. Concepts of Scene Design. 3 Hours

Studies in the principles of composition and aesthetic theory as applicable to scene design. Development of personal design approach to plays of various styles. Required of all theatre majors.

### THR 340. The Director in the Theatre. 3 Hours

The basic functions of a director in the production of play: interpretation, composition, movement, characterization, rhythm, design concept, and actor training. Required of all theatre majors. Prerequisite(s): THR 105, THR 310, THR 330.

### THR 344. Acting/Directing for Musical Theatre. 3 Hours

Study of performance and directing techniques for Musical Theatre.

### THR 350. Theatre Styles. 3 Hours

Examination of the relationships among playwright, audience, actor, designer, and director in the development of major theatre styles of expression.

### THR 351. Intermediate Jazz Dance. 2 Hours

Intermediate course in the theory and practice of tap dance.

**THR 361. Intermediate Jazz Dance. 2 Hours**

An intermediate course in the theory and practice of jazz dance and technique. Prerequisite(s): Permission of department chairperson.

**THR 370. Topics in Theatre Study. 1-6 Hours**

Study of special topics or themes in theatre performance and production. May be repeated as topics change. Prerequisite(s): Permission of department chairperson.

**THR 371. Intermediate Ballet. 2 Hours**

Intermediate course in the theory and practice of classical ballet technique. Prerequisite(s): Permission of department chairperson.

**THR 414. Advanced Scene Design. 3 Hours**

Individual development in scene design through intensive study in plays of various styles. Detailed representation of design ideas in rendering and models required. Prerequisite(s): THR 330; permission of department chairperson.

**THR 415. History of the Theatre I. 3 Hours**

History of theatre from pre-Grecian through Elizabethan; the physical theatre as reflection of and influence on civilization. (THR 415 or THR 425 required of all majors.).

**THR 424. Play Directing. 3 Hours**

Study of the evolution of the modern director. Emphasis is on script interpretation as a basis for the development and execution of the production concept. Prerequisite(s): THR 340.

**THR 425. History of Theatre II. 3 Hours**

Continuance of 415 from the Italian Renaissance to the modern theatre. (THR 415 or THR 425 required of all majors.).

**THR 440. Problems in Theatre II. 3 Hours**

Individual research and project work of student's selection under the direct supervision of faculty. (THR 440 or THR 485 or THR 490 required of all majors.) Repeatable up to twelve semester hours. Prerequisite(s): Permission of department chairperson.

**THR 477H. Honors Thesis. 3 Hours**

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

**THR 478H. Honors Thesis. 3 Hours**

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.

**THR 485. Theatre Seminar. 3-6 Hours**

Concentration on one theatrical figure, genre period, or discipline for research and analysis. (THR 440 or THR 485 or THR 490 required of all majors.) Repeatable up to six semester hours. Prerequisite(s): Permission of department chairperson.

**THR 490. Special Problems in Theatre. 3-5 Hours**

Individual research and report on topic of student's choice in the field of theatre under direct supervision of faculty/staff. (THR 440 or THR 485 or THR 490 required of all majors.) Repeatable up to nine semester hours.

**THR 498. Theatre Internship. 1-3 Hours**

Theatre work experience with an approved organization. Student must be in good academic standing with at least twelve hours of theatre courses completed. Student may petition the head of the Theatre Program for a second internship if the second internship is at a different organization and the student can demonstrate that the second internship offers a unique and significant educational opportunity not available through the first internship. Permission. Grading Option Two only.

## Women's and Gender Studies

Major:

- Bachelor of Arts, Women's and Gender Studies (p. 285)

Minor:

- Women's and Gender Studies (p. 286)

Women's and gender studies places the experiences and perspectives of women at the center of analysis and also considers how gender intersects with other factors, such as race and class, to shape all of our lives. Interdisciplinary in nature, and founded upon the integration of theory and practice, critique and imagination, women's and gender studies brings approaches from other disciplines and fields into conversation with each other and with critical theories about gender and power to address and improve the lives of women and, by extension, of children and men. Inspired by both feminist and Marianist traditions, the Women's and Gender Studies Program at UD seeks to promote:

- Integration, collaboration, and personal engagement in learning
- The development and dissemination of critical thinking for social justice
- The appreciation and protection of human dignity and diversity
- Leadership through responsibility and service to community

Students majoring in women's and gender studies must complete 34 semester hours, including at least ten semester hours in four core WGS courses and 24 semester hours of upper-division courses offered by other departments. For these additional 24 semester hours, students must complete nine semester hours in one area of concentration, six semester hours in each of two additional areas, and three semester hours in a fourth area.

The major also has a cultural diversity requirement of six semester hours. (These hours may be from courses that are also used to fulfill the area requirements.) Of the six hours, three must be from a course that emphasizes race, and/or that takes a multicultural approach, within a U.S. or European context; the other three must be from a course that focuses on a non-U.S./European context or that takes a comparative international approach.

Courses taken for the major may also count toward completion of the Liberal Studies Curriculum.

Students minoring in women's and gender studies must complete at least 15 semester hours, including one interdisciplinary core course (WGS 150 (<http://catalog.udayton.edu/undergraduate/collegeofartsandsciences/programsofstudy/womensandgenderstudies>), WGS 310 (<http://catalog.udayton.edu/undergraduate/collegeofartsandsciences/>

programsofstudy/womensandgenderstudies) or WGS 350 (<http://catalog.udayton.edu/undergraduate/collegeofartsandsocieties/programsofstudy/womensandgenderstudies>)) and twelve hours in approved upper-division courses (300-level or above) from at least three different disciplines. Alternatively, minors may take two of the interdisciplinary core courses, and nine hours in approved upper-division courses from three different disciplines.

### Women's and Gender Studies Committee

Rebecca Whisnant (Philosophy), Director  
 Bennett (Religious Studies), Damasco (Roesch Library), DesAutels (Philosophy), Fischer (Philosophy), Fleischmann (History), Hudson (Political Science), James (Philosophy), Laufer-Ukeles (Law), Leming (Sociology, Anthropology, and Social Work), Merithew (History), Picca (Sociology, Anthropology, and Social Work), Rismiller (Women's Center), Watters (Communication)

## BACHELOR OF ARTS WITH A MAJOR IN WOMEN'S AND GENDER STUDIES (WGS) Minimum 124 Hours

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
HST 103 West and the World (p. 284)	
REL 103 Introduction to Religious and Theological Studies (p. 284)	
PHL 103 Intro To Philosophy (p. 284)	
ENG 100 Writing Seminar I <sup>2</sup> (p. 284)	
Second-Year Writing Seminar <sup>3</sup>	0-3
ENG 200 Writing Seminar II (p. 284)	
Oral Communication	3
CMM 100 Principles of Oral Communication (p. 284)	
Mathematics	3
Social Science	3
Arts	3
Natural Sciences <sup>4</sup>	7
Crossing Boundaries	variable credit
Faith Traditions	
Practical Ethical Action	
Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

- Completed with ASI 110 (p. 284) and ASI 120 (p. 284).
- Or ENG 100A (p. 284) and ENG 100B (p. 284), or ENG 200H (p. 284), by placement.
- Completed with ENG 200H (p. 284) or ASI 120 (p. 284).
- Must include two different disciplines and accompanying lab.

### Liberal Studies Curriculum

Creative and Performing Arts (May include CAP Arts)	3
L2 Proficiency (Proficiency in a language other than English)	0-11
Literature (May include CAP Components)	3
Mathematics, excluding MTH 205 (Satisfies CAP Mathematics)	3
Natural Sciences (Satisfies CAP Natural Science)	11
Social Sciences (Includes CAP Social Science)	12

### Major Requirements

(May include CAP Components)	34
WGS 150 Introduction to Women's & Gender Studies <sup>1,2</sup>	3
or WGS 350 Feminist Social Change	
WGS 310 Feminist Theory & Methodology	3
WGS 390 Service Learning in Women's & Gender Studies	1-3
WGS 490 Senior Seminar in Women's & Gender Studies (Satisfies CAP Major Capstone)	3

### First area courses:

Select nine semester hours from one area below	9
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### Second area courses:

Select six semester hours from a second area below	6
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### Third area courses:

Select six semester hours from a third area below	6
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### Fourth area courses: <sup>3</sup>

Select three semester hours from the final area below	3
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### Areas: <sup>4</sup>

#### Literature and Arts

CMS 415	Women & Communication
ENG 333	Images of Women in Literature
ENG 335	African American Literature
ENG 336	Gender in Fiction
ENG 345	Colonial & Postcolonial Literature
VAH 360	Art History & Feminism

#### History

HST 347	Sex, Race & Science
HST 350	Gay & Lesbian U.S. History
HST 351	American Gender & Women's History
HST 352	History of the American Family
HST 353	History of Women in European Societies
HST 354	History of Women & Gender in the Middle East
HST 356	Comparative History of Women in the Third World

#### Philosophy and Religious Studies

PHL 307	Philosophy & Women
PHL 364	Race, Gender & Philosophy
REL 471	Women & Religion
REL 472	Ecology & Religion



REL 474	Women & the Global Church
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**Social Sciences**<sup>3</sup>

ANT 306	Culture & Power
HSS 325	Women in Sport
POL 340	Gender & International Relations
PSY 443	Psychology of Women
PSY 462	Human Sexuality
SOC 322	Sex Roles & Society
SOC 330	Perspectives on Aging
SOC 331	Marriages & Families
SOC 332	Sociology of Women
SOC 333	Sociology of Sexualities
SOC 339	Social Inequality
SOC 432	Structure of Privilege
SWK 325	Child Abuse
SWK 327	Parenting: Social Welfare Role
SWK 330	Perspectives on Aging
SWK 370	Social Welfare Policy
UDI 341	Sexual Diversity

**Cultural Diversity Requirement**<sup>5</sup>

Select one U.S./Europe Multicultural course from: 3

ENG 335	African American Literature
HST 351	American Gender & Women's History
HST 353	History of Women in European Societies
PHL 364	Race, Gender & Philosophy
SOC 432	Structure of Privilege

Select one Global (non U.S./Europe) course from: 3

ANT 306	Culture & Power
ENG 345	Colonial & Postcolonial Literature
HST 354	History of Women & Gender in the Middle East
HST 356	Comparative History of Women in the Third World
POL 340	Gender & International Relations
REL 471	Women & Religion
REL 474	Women & the Global Church

**Breadth**

ASI 150 Introduction to the University Experience 1

Total hours to total at least 124

<sup>1</sup> Restricted to students with no more than six semester hours applicable to a WGS major or minor. This course counts toward the WGS major only if taken before any other WGS core course.

<sup>2</sup> A major who has taken WGS 150 may also take WGS 350 in lieu of one of the required disciplinary courses. WGS 350 will be counted toward the area requirement that most reflects the course's content during the relevant term.

<sup>3</sup> In order to achieve some balance in approach, students must complete at least six semester hours each in both social sciences (anthropology, political science, psychology, sociology, and social work) and humanities (literature, arts, history, philosophy, and religious studies) courses. For this reason, social sciences must normally serve as the first, second, or third area, and not as the fourth.

<sup>4</sup> Other courses may be counted toward the major, with approval of the program director, and depending on topic and content during a given semester.

<sup>5</sup> This requirement may be satisfied with courses that are also used to fulfill the area requirements. Of the six semester hours, three must be from a course that emphasizes race, and/or that takes a multicultural approach, within a U.S. or European context; the other three must be from a course that focuses on a non-U.S./European context or that takes a comparative international approach.

**MINOR IN WOMEN'S AND GENDER STUDIES (WGS)****Women's and Gender Studies**<sup>1</sup>

WGS 150	Introduction to Women's & Gender Studies	3
or WGS 310	Feminist Theory & Methodology	
or WGS 350	Feminist Social Change	

Select twelve semester hours from at least three different academic disciplines (300/400 level)<sup>2</sup> 12

Total Hours 15

<sup>1</sup> Students who wish to minor in Women's and Gender Studies should contact the director of the Women's and Gender Studies Program.

<sup>2</sup> A student may, alternatively, take two of the indicated WGS core courses (WGS 150 (<http://catalog.udayton.edu/undergraduate/collegeofartsandsciences/programsofstudy/womensandgenderstudies>), WGS 310 (<http://catalog.udayton.edu/undergraduate/collegeofartsandsciences/programsofstudy/womensandgenderstudies>), WGS 350 (<http://catalog.udayton.edu/undergraduate/collegeofartsandsciences/programsofstudy/womensandgenderstudies>)) and three upper-level courses from three different disciplines.

**First Year**

Fall	Hours Spring	Hours
ASI 150	1 CMM 100 (CAP Communication)	3
REL 103	3 SCI 190 & 190L	4
PSY 101	3 ENG 100 (CAP Writing Seminar)	3
MTH 114	3 PHL 103 (CAP Humanities)	3
HST 103	3 Language 141	4
Language 101	4	
	<b>17</b>	<b>17</b>

**Second Year**

Fall	Hours Spring	Hours
SCI 210 or 220	3 ENG 200	3
SCI 210L or 220L	1 PSY at 300 or 400 level	3
Language contextual course	3 PSY 443	3
WGS 150 or 350	3 SCI 230 or 240	3
Arts Study	3 Social Science	3
Social Science Intro	3 General elective	3
	<b>16</b>	<b>18</b>

**Third Year**

Fall	Hours Spring	Hours
ENG 333	3 ENG 336	3
REL 471 (or Adv REL or PHL)	3 HST 347	3
Arts Study	3 Integrative	3
General elective	3 PHL 307 (or Adv REL or PHL)	3
	HST 351 (or Adv HST)	3
	<b>12</b>	<b>15</b>

**Fourth Year**

Fall	Hours Spring	Hours
Inquiry	3 WGS 490	3
Practical and Ethical Action	3 CMS 415	3
ANT 306	3 Diversity and Social Justice	3
WGS 310	3 General elective	3
WGS 390	1 General elective	3
General Elective	3	
	<b>16</b>	<b>15</b>

Total credit hours: 126

**Courses****WGS 150. Introduction to Women's & Gender Studies. 3 Hours**

Introduction to history, methods, and key debates in Women's and Gender Studies. Intersectional (studying gender as it intersects with other social identity categories such as race, class, and sexuality), multi- or interdisciplinary (drawing from the arts, humanities, social sciences, and natural sciences), and multicultural in approach. Prerequisite(s): Restricted to students with no more than six semester hours applicable to a WGS major or minor.

**WGS 310. Feminist Theory & Methodology. 3 Hours**

Exploration of the intersections of feminist epistemology, methodology, politics, and ethics. Consideration and comparison of a range of theories about gender, power, and knowledge that have shaped the development of feminist and womanist thought, research, practice, and movement in the U.S. and in other parts of the world. Prerequisite(s): WGS 150 or six semester hours prior WGS credit.

**WGS 310H. Feminist Theory & Methodology. 3 Hours**

Exploration of the intersections of feminist epistemology, methodology, politics, and ethics. Consideration and comparison of a range of theories about gender, power, and knowledge that have shaped the development of feminist and womanist thought, research, practice, and movement in the U.S. and in other parts of the world. Prerequisite(s): WGS 150 or six semester hours prior WGS credit.

**WGS 350. Feminist Social Change. 3 Hours**

Exploration of the methods and priorities of feminist social change efforts in varying national, cultural, and/or religious contexts, including outside of the U.S. and Europe. Investigation of the nature, possibilities, and challenges of global/transnational feminist movement(s). Prerequisite(s): WGS 150 or six semester hours prior WGS credit.

**WGS 380. Special Topics in Women's & Gender Studies. 1-3 Hours**

Intensive examination of current thematic, theoretical, or methodological issues in the field of Women's and Gender Studies. Consult composite for topics. May be repeated as topic changes. Prerequisite(s): WGS 150 or WGS 310 or WGS 350 or six semester hours prior WGS credit.

**WGS 390. Service Learning in Women's & Gender Studies. 1-3 Hours**

Individualized placements in community organizations that enable students to apply and enrich their formal studies by engaging in service work that addresses women's needs and/or advances social justice in relation to gender. May be done as an independent or group study under the direction of a WGS faculty member. May also be done in conjunction with another course. May be repeated up to a maximum of three semester hours. Prerequisite(s): WGS 150 or WGS 310 or WGS 350; permission of program director.

**WGS 477H. Honors Thesis. 3 Hours**

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and departmental chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.

**WGS 478H. Honors Thesis. 3 Hours**

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and departmental chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477 and approval of University Honors Program.

**WGS 480. Independent Study in Women's & Gender Studies. 3 Hours**

Individual investigations of special topics in the field of Women's and Gender Studies under faculty direction. May be repeated under special circumstances. No more than six semester hours of WGS 480 may count toward the major. Prerequisite(s): WGS 150 or WGS 310 or WGS 350; approval of program director.

**WGS 490. Senior Seminar in Women's & Gender Studies. 3 Hours**

Concentration on a particular topic or problem in Women's and Gender Studies, with focus on critical theories, methodologies, ethics and practices appropriate for advanced feminist research. Emphasis on integration (e.g. of feminist theory, methods, and practice) and interdisciplinarity. May require students either to work collaboratively on a single research project or to apply certain theories or methods central to the seminar in their exploration of individual projects. May be repeated as topics change. Prerequisite(s): WGS 150 or WGS 350, WGS 310.

# School of Business Administration

Paul M. Bobrowski, Dean  
Terence J. Lau, Associate Dean  
Harvey G. Enns, Associate Dean

## Mission

The School of Business Administration is a learning community committed in the Catholic and Marianist tradition to educating the whole person and to connecting learning and scholarship with leadership and service in an innovative business curriculum designed to prepare ethical leaders for successful careers in a global business environment.

Through the curriculum and co-curriculum of the School, students develop the ability to integrate learning across disciplines, apply the theory they are learning to real business problems, and lead with ethics and integrity. Success in business requires an understanding of human values and the society in which business operates as well as mastery of the various areas of business. For this reason, the undergraduate curriculum includes three areas of coursework:

- A foundation in the liberal arts (which includes the University Common Academic Program)
- A firm grounding in the common body of business knowledge (core business requirements)
- Specialization in a business major

## Curriculum Overview

The undergraduate curriculum for students earning a BS in Business Administration includes three areas of coursework:

- A foundation in the liberal arts (which includes the University Common Academic Program)
- A firm grounding in the common body of business knowledge (core business requirements)
- Specialization in a business major

All business students follow essentially the same curriculum during their first and second years, regardless of major. This curriculum consists of a common set of liberal arts and core business requirements with the first year mostly devoted to liberal arts requirements.

In the third and fourth years, all business students also take a common set of upper level liberal arts and core business requirements in addition to courses to complete their chosen major.

For information on majors and minors offered by the School of Business Administration and their requirements, visit the Programs of Study link.

Each major requires several hours of general electives, typically 0-12 hours depending upon the major and choice of courses in the Common Academic Program. Students often use these general electives to support an additional major or minor.

Students need 124 hours to graduate, with 54 hours at the upper level (300-400). At least 75 percent of the required courses in business disciplines must be taken at the University of Dayton.

Students should consult with their academic advisor in the SBA Center for Academic Success in addition to tracking their own progress towards degree requirements.

## Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
HST 103 West and the World	
REL 103 Introduction to Religious and Theological Studies	
PHL 103 Intro To Philosophy	
ENG 100 Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>	0-3
ENG 200 Writing Seminar II	
Oral Communication	3
CMM 100 Principles of Oral Communication	
Mathematics	3
Social Science	3
Arts	3
Natural Sciences <sup>4</sup>	7
Crossing Boundaries	variable credit
Faith Traditions	
Practical Ethical Action	
Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

## SBA Core Curriculum

ACC 207	Introduction to Financial Accounting	3
ACC 208	Introduction to Managerial Accounting	3
BAI 150	Business Educational Planning	1
BAI 103L	Business Computing Laboratory	1
BAI 151	Business Integration Experience	1
DSC 210	Statistics for Business I	3
DSC 211	Statistics for Business II	3
ECO 203	Principles of Microeconomics (Satisfies CAP Social Science)	3
ECO 204	Principles of Macroeconomics	3
ENG 370	Report & Proposal Writing (Satisfies CAP Inquiry)	3
or ENG 371	Technical Communication	
or ENG 372	Business Communication	
FIN 301	Introduction to Financial Management	3

MGT 201	Legal Environment of Business	3
MGT 301	Organizational Behavior	3
MGT 490	Managing the Enterprise (Satisfies CAP Integrative)	3
MTH 128	Finite Mathematics	3
MTH 129	Calculus for Business (Satisfies CAP Mathematics)	3
MIS 301	Information Systems in Organizations	3
MKT 301	Principles of Marketing	3
OPS 301	Survey of Operations & Supply Management	3
PHL 313	Business Ethics (Satisfies CAP Practical Ethical Action and Adv Studies in PHL/REL)	3
or REL 368	Practical wisdom in the business world	
ECO elective (300/400 level)		3
Social Science elective (ANT, POL, PSY, SOC)		3

### Major Requirements

For courses required for the major, visit program descriptions in Programs of Study.

### General Electives

Majors have 0-12 hours of general electives depending upon the major and choice of courses in the Common Academic Program. Many students use the general elective hours to support an additional major or minor.

## Academic Programs

The School of Business Administration offers a Bachelor of Science in Business Administration degree with majors and minors in:

- Accounting (p. 291)
- Business Economics (p. 295)
- Entrepreneurship (p. 303)
- Finance (p. 296) (emphasis in Investment Management available to Finance majors)
- International Business Management (p. 305) (majors choose either Global Markets or Human Resources emphasis)
- Management Information Systems (p. 316)
- Marketing (p. 307) (emphasis in Sales Management or Product Innovation available to Marketing majors)
- Operations and Supply Management (p. 318)

Minors are also available in:

- Business Administration (p. 294) (non-business majors only)
- Business Analytics (p. 320)
- Business Intelligence (p. 317)
- Cyber-Security (p. 317)

Double majors and minors in business administration programs, and also in non-business programs, are available. A maximum of seven hours of coursework can double count between double majors and a major and a minor. Interested students should consult with their academic advisor in the SBA Center for Academic Success for details.

A Bachelor of Science in Business Administration with a major in accounting, coupled with an MBA degree is also available. This program normally requires a fifth year of study. Students must apply and qualify

for admission into graduate school during their fourth year in order to participate.

## Degree Requirements

1. The candidate must successfully complete all course requirements for the BS in Business Administration including:

- a. courses in the liberal arts required by the University Common Academic Program
- b. courses in business and liberal arts required for all School of Business Administration (SBA) students;
- c. courses required to complete a major in the SBA.

2. Students must complete 124 total semester hours to graduate.

- a. Courses totaling 54 semester hours must be at the 300-400 level.
- b. Waived course hours must be made up with an equivalent number of undergraduate course hours.
- c. Only 7 hours of course work can double count between two majors or a major and a minor.
- d. From 0 to 12 hours of general elective credits are required to reach the required total semester hours, depending on major and choice of courses to fill Common Academic Program requirements. The general elective hours may be used to support a second major or minor.
- e. At least 30 of the final 36 semester hours must be earned in residence at the University of Dayton.
- f. At least 75 percent of the student's required courses in business disciplines must be taken at the University of Dayton. Exceptions are made for transfer students.

3. The candidate for graduation must have at least a 2.0 cumulative grade point average and also at least a 2.0 grade point average in each major and minor. The 2.0 grade point average in the major includes all courses attempted in the student's major except for the courses that are part of the SBA core.

4. In addition to those courses which must be taken under Option 1, a student may take a maximum of 12 semester hours of general electives under Option 2 within the hours required for graduation in the degree program. A student may take any course beyond the minimum hours required for graduation in the degree program under Option 2. All courses that are used to fulfill Liberal Arts, Business, major, minor and competency requirements must be taken under Option 1.

5. The candidate has the responsibility of meeting degree requirements for the BS in Business Administration. Therefore, the student should be thoroughly familiar with the degree requirements and with his or her progress towards meeting those requirements.

## Transfer Students

Candidates for admission from other accredited colleges or universities must be in good academic standing in the colleges or universities from which they are transferring and submit a complete application in accordance with UD admissions policies.

### INTERNAL TRANSFERS

Students must first attend an initial internal transfer meeting with an Academic Advisor in the School of Business Administration. Stop in the



Center for Academic Success in Miriam Hall 108 to schedule this initial SBA internal transfer meeting.

#### Minimum Requirements:

1. Minimum cumulative UD GPA of 2.7
2. Successful completion of an appropriate UD Math course, such as a UD Calculus class, a C+ or higher in MTH 116 or MTH 128, or a B- or higher in MTH 207. Math courses taken at another college or university will not be considered.

## Cooperative Education

The School of Business Administration participates in the University of Dayton Cooperative Education Program, which is an optional program often consisting of full-time, on-campus study alternating with terms of full-time, off-campus work. For a fuller explanation of the program, visit Cooperative Education (p. 46).

## Internship

Internships are defined as professional work experience. The intent is to provide practical experience in implementing the theory and skills learned in the classroom in work associated with the student's academic major. It is an option open to all undergraduate students pursuing four-year programs.

Students can earn academic credit for internships through the department of their major. Such credit is applied as general elective credit only. Approval from the department chairperson or the chairperson's designee is a prerequisite for earning general elective credit for participation in the program. Individual departments may require other prerequisite courses prior to the internship experience. Students are responsible for checking with the department of their major prior to beginning the internship to determine the prerequisites unique to the department. The maximum number of semester hours that may be earned over the full four-year degree program is six.

Positions offered to students may be either compensatory or noncompensatory. The intent of the internship is to be beneficial to both the students and the participating organizations. Assistance in finding internships is available from Career Services, department chairs and faculty.

## Study Abroad Programs

Students in the School of Business Administration (SBA) may participate in the University of Dayton Summer Study Abroad Programs as well as Semester Exchange Programs with partners throughout the world. Details on both these programs can be found at [www.udayton.edu/edabroad](http://www.udayton.edu/edabroad) and brief descriptions are provided below. Students may also study abroad at universities that are not affiliated with the University of Dayton as long as they receive prior written approval from the UD Center for International Programs and their academic advisor.

The University of Dayton China Institute offers full semesters of study in China for fall and spring semesters as well as a summer program. Learn more at [www.udayton.edu/china\\_institute](http://www.udayton.edu/china_institute).

### Summer Programs

A variety of summer programs are available for students to consider, each with its own theme and location. For example, students can travel to Europe, South America, Asia, or Africa. Most of these programs are

conducted during two separate five-week summer terms. Shorter two-week trips are also available during summer and the Intersession (winter break). The programs are taught by UD faculty and offer students the opportunity to complete required and theme-based elective courses in settings such as England, Spain, Italy, Germany, China, and more. Students participating in Summer Study Abroad register to take at least two classes (6 credit hours) plus a 1-credit cultural immersion mini-course in a summer session. Participants will complete work equivalent to that of courses taken on campus, with the added requirement of applying their studies to the site they are visiting.

Accepted students are required to participate in a comprehensive orientation and preparation class in which features about their destination country are studied along with University safety and security procedures and other pre-departure details. Students on academic or behavioral probation are not permitted to participate in any University study abroad program. All interested students are encouraged to meet with their advisor or the Study Abroad Director well in advance of any travel.

### Semester Exchange Programs

Students may also wish to spend an extended time studying overseas. For those students, UD provides several opportunities to take classes with one of our foreign exchange partners throughout the world. Exchanges can be undertaken either during the Fall or Spring semesters, and students will live and study with other domestic and international students at our foreign exchange partner institutions. Courses are typically taught in English, although some partners have foreign language requirements. To ensure courses taken during a semester exchange transfer to UD, students must seek approval by advisors in the Center for International Programs (CIP) as well as their SBA advisor before undertaking an exchange.

### Planning for Education Abroad

Students should ideally begin planning during their first year for participation in a study abroad program, determining which courses are normally offered and then holding those courses for their international experience and completing any necessary prerequisites prior to the program. If pre-approved by SBA advisors, the courses taken abroad will then count for the student's degree program, keeping the student on track to graduate on time or even ahead of schedule.

For more information please contact:

### Short Term Study Abroad Exchange Programs/Partner Information

Peter G. Wagner, Director Heather Schieman, Education Abroad Advisor  
SBA Study Abroad Programs Center for International Programs  
AN 119 Rike 211  
937-229-2479 937-229-1251  
[pwagner1@udayton.edu](mailto:pwagner1@udayton.edu) [hschieman1@udayton.edu](mailto:hschieman1@udayton.edu)

## Programs of Study

To learn more about the available programs in the School of Business Administration, explore the departments:

- Accounting (p. 291)
- Business Interdisciplinary Studies (p. 294)
- Economics and Finance (p. 294)
- Management and Marketing (p. 302)

- Management Information Systems, Operations Management, and Decision Sciences (p. 291)

## Accounting

Major:

- Bachelor of Science in Business Administration, Accounting (p. 291)

Minor:

- Accounting (p. 292)

Our mission is to educate distinctive accounting students by providing high quality educational programs that combine theory and practice within a Catholic and Marianist environment. We are committed to educating the whole person by integrating learning, scholarship, leadership, and service preparing our graduates to add value to employers and society.

In addition to other requirements, an accounting major must earn credit in seven upper-level accounting courses: ACC 303, ACC 305, ACC 306, ACC 341, ACC 401, ACC 408, and ACC 420.<sup>1</sup> For students electing to complete a combined BSBA with a major in accounting and an MBA, ACC 408 may be waived and replaced by MBA 603A. All upper-division accounting courses require a minimum grade of "C" in all prerequisite accounting courses, except that ACC 303 and ACC 305 require a minimum of "C+" in ACC 207 and ACC 208. Students should consult with their academic advisor about selecting accounting and other elective courses appropriate to particular career goals. Students should also consult their advisor or the chairperson about opportunities for professional work-experience, double majors and minors, foreign exchange opportunities, and requirements for professional examinations (e.g., CPA).

<sup>1</sup> Students entering UD Fall 2013 or later will additionally complete a capstone experience such as ACC 497.

Ohio and numerous other states require 150 semester hours to become a CPA. The MBA program, with an optional concentration in accounting, is particularly useful in this regard. Our integrated Bachelor + Master program allows for the completion of both degrees, plus professional work experience, foreign exchange experience and a second major or minor, in five years. Consult the department chairperson or an adviser for more information.

### Faculty

Donna Street, Chairperson

Professors Emeriti: Burrows, Clark, Eley, Fioriti, Geary, Greenlee, Roehm, Rosenzweig

Mahrt Chair in Accounting: Street

Professors: Castellano, Street

Associate Professors: Archambeault, Brady

Assistant Professors: M. Keune, T. Keune, Webber, Zelazny

Lecturers: Shankar, Stover

## Bachelor of Science in business administration with a major in Accounting (ACC) minimum 124 credit hours

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>

12

HST 103	West and the World	
REL 103	Introduction to Religious and Theological Studies	
PHL 103	Intro To Philosophy	
ENG 100	Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>		0-3
ENG 200	Writing Seminar II	
Oral Communication		3
CMM 100	Principles of Oral Communication	
Mathematics		3
Social Science		3
Arts		3
Natural Sciences <sup>4</sup>		7
Crossing Boundaries		variable credit
Faith Traditions		
Practical Ethical Action		
Inquiry		
Integrative		
Advanced Study		variable credit
Philosophy and/or Religious Studies		
Historical Studies		
Diversity and Social Justice		3
Major Capstone		0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

### SBA Core Curriculum

ACC 207	Introduction to Financial Accounting	3
ACC 208	Introduction to Managerial Accounting	3
BAI 150	Business Educational Planning	1
BAI 103L	Business Computing Laboratory	1
BAI 151	Business Integration Experience	1
DSC 210	Statistics for Business I	3
DSC 211	Statistics for Business II	3
ECO 203	Principles of Microeconomics (Satisfies CAP Social Science)	3
ECO 204	Principles of Macroeconomics	3
ENG 370	Report & Proposal Writing (Satisfies CAP Inquiry)	3
or ENG 371	Technical Communication	
or ENG 372	Business Communication	
FIN 301	Introduction to Financial Management	3
MGT 201	Legal Environment of Business	3
MGT 301	Organizational Behavior	3
MGT 490	Managing the Enterprise (Satisfies CAP Integrative)	3
MTH 128	Finite Mathematics	3
MTH 129	Calculus for Business (Satisfies CAP Mathematics)	3

MIS 301	Information Systems in Organizations	3
MKT 301	Principles of Marketing	3
OPS 301	Survey of Operations & Supply Management	3
PHL 313	Business Ethics (Satisfies CAP Practical Ethical Action and Adv Studies in PHL/REL)	3
or REL 368	Practical wisdom in the business world	
ECO elective (300/400 level)		3
Social Science elective (ANT, POL, PSY, SOC)		3

## Minor in Accounting (ACC)

### Accounting (business majors)

ACC 305	Intermediate Financial Accounting I Part I	4
ACC 306	Intermediate Financial Accounting II Part II	3
Select two ACC electives <sup>1</sup>		6-8
Total Hours		13-15

### Accounting (non-business majors)

ACC 207	Introduction to Financial Accounting	3
ACC 208	Introduction to Managerial Accounting <sup>2</sup>	3
ACC 305	Intermediate Financial Accounting I Part I	4
ACC 306	Intermediate Financial Accounting II Part II	3
Select two ACC electives		6-8
Total Hours		19-21

<sup>1</sup> In consultation with the department chairperson.

<sup>2</sup> Prerequisite and corequisite must be taken.

### First Year Hours

CAP First Year Humanities Commons	12
BAI 150	1
BAI 151	1
BAI 103L	1
MTH 128	3
MTH 129 (Satisfies CAP Mathematics)	3
CMM 100 (Satisfies CAP Oral Communication)	3
CAP components	10

**34**

### Second Year Hours

CAP Second Year Writing Seminar	3
CAP Social Science	3
ACC 207	3
ACC 208	3
DSC 210	3
DSC 211	3
ECO 203	3
ECO 204	3
MGT 201	3
CAP components	3

**30**

### Third Year Hours

FIN 301	3
MGT 301	3
MIS 301	3
MKT 301	3
OPS 301	3
ENG 370, 371, or 372 (Satisfies CAP Inquiry )	3
ACC 303	3
ACC 305	4
ACC 306	3
CAP Components and/or General Electives	3

**31**

### Fourth Year Hours

MGT 490 (Satisfies CAP Integrative )	3
PHL 313 or REL 369 (Satisfies CAP Practical Ethical Action and Adv Studies in PHL/REL)	3
ECO upper level elective	3
ACC 341	3
ACC 401	4
ACC 408	3
ACC 420	4
ACC 497 ( Satisfies CAP Major Capstone)	3
CAP Components and/or General Electives	3

**29**

Total credit hours: 124

## Courses

### ACC 200. Introduction to Accounting. 3 Hours

Introduction to primarily financial and secondarily managerial accounting concepts, terminology, purposes, and applications for the nonbusiness student. Not open to students in the School of Business Administration or to those with credit in ACC 207.

### ACC 207. Introduction to Financial Accounting. 3 Hours

Introduction to financial accounting concepts, procedures, and terminology. The accounting framework for recording transactions and reporting to parties external to the organization. Prerequisite(s): Sophomore standing or permission of department chairperson.

### ACC 207H. Introduction to Financial Accounting. 3 Hours

Introduction to financial accounting concepts, procedures, and terminology. The accounting framework for recording transactions and reporting to parties external to the organization. Prerequisite(s): Sophomore standing or permission of department chairperson.

### ACC 208. Introduction to Managerial Accounting. 3 Hours

Management use of accounting data in planning and controlling organization activities; cost accounting and analysis of data for management decision making. Prerequisite(s): ACC 207. Corequisite(s): BAI 103L.

**ACC 208H. Introduction to Managerial Accounting. 3 Hours**

Management use of accounting data in planning and controlling organization activities; cost accounting and analysis of data for management decision making. Prerequisite(s): ACC 207. Corequisite(s): BAI 103L.

**ACC 300A. Principles of Financial Accounting. 1.5 Hour**

An introduction to the concepts and procedures underlying financial accounting and financial statements, and the use of financial accounting information for decision making. Credit may not be earned for both ACC 300A and either ACC 200 or ACC 207. Prerequisite(s): Engineering major; sophomore standing; permission of department chairperson.

**ACC 300B. Principles of Managerial Accounting. 1.5 Hour**

An introduction to the concepts underlying the preparation and use of accounting data by managers as they plan, control, and make decisions within an organization. Credit may not be earned for both ACC 300B and ACC 208. Prerequisite(s): ACC 300A; engineering major; sophomore standing; permission of department chairperson.

**ACC 303. Managerial Accounting. 3 Hours**

The production, dissemination, and interpretation of financial and nonfinancial information for use within an organization. Information for planning, decision making, and control. Study of typical cost accounting systems in various organizations. Prerequisite(s): (ACC 207, ACC 208, with minimum grades of 'C+'; junior standing) or permission of department chairperson.

**ACC 305. Intermediate Financial Accounting I Part I. 4 Hours**

Part I (part II in ACC 306) of a comprehensive treatment of financial accounting concepts, principles, and procedures used in the preparation and analysis of financial statements. Prerequisite(s): (ACC 207, ACC 208, with minimum grades of 'C+'; junior standing) or permission of department chairperson.

**ACC 306. Intermediate Financial Accounting II Part II. 3 Hours**

Part II of comprehensive treatment of financial accounting concepts, principles, and procedures used in the preparation and analysis of financial statements. Prerequisite(s): ACC 305 with a minimum grade of 'C'.

**ACC 341. Accounting Information Systems I. 3 Hours**

Study of designs of accounting systems, including their impact on management decision making and control. Emphasis on (1) a systems approach to the flow of data, (2) system internal control, and (3) computer applications in accounting. Prerequisite(s): ACC 305 with a minimum grade of 'C'; MIS 301.

**ACC 401. Auditing Principles. 4 Hours**

Study of the concepts, standards, and procedures used to judge and report on the degree of correspondence between quantifiable information and established criteria; the ethical, regulatory, and professional responsibilities of the auditor and introduction to internal, operational, and governmental auditing. Prerequisite(s): ACC 306 with a minimum grade of 'C'; ACC 341 with a minimum grade of 'C'.

**ACC 404. Advanced Strategic Cost Management. 3 Hours**

Study of processes focused on strategic cost management. Topics include balanced scorecards, activity-based costing management, target costing, lean accounting, six sigma, environmental accounting, and performance measurement and control systems. Prerequisite(s): (ACC 303; OPS 301) with a minimum grade of 'C'.

**ACC 408. Advanced Financial Accounting. 3 Hours**

Study of consolidated financial statements and accounting for business combinations, government organizations, multinational subsidiaries, and foreign currency transactions. Selected IFRS issues are integrated into the course. Prerequisite(s): ACC 306 with a minimum grade of C or permission of department chairperson.

**ACC 412. International Accounting. 3 Hours**

This class includes a comprehensive study of International Financial Reporting Standards (IFRS). Students will complete the Institute of Chartered Accountants in England and Wales' (ICAEW) IFRS learning and assessment program and upon successful completion earn an IFRS certificate from this globally recognized professional accountancy body. Effective Fall 2013: minimum 3.0 cumulative and major gpa required.

**ACC 412A. Contemporary Issues in Accounting. 3 Hours**

Seminar covering emerging or controversial issues for the student who has a strong accounting background. Topics include the business and financial situations that underlie accounting problems and controversies, alternative accounting techniques which are accepted or proposed, and the consequences of various accounting practices. Prerequisite(s): ACC 306 or permission of instructor.

**ACC 412B. International Accounting. 3 Hours**

Study of current topics in international accounting. This course will typically include a week or more of study outside of the U.S. that will include lectures and relevant site visits. In addition to normal tuition, there may be travel and other costs and fees. Foreign locations, countries, topics, and duration may vary. Prerequisite(s): ACC 306 or permission of instructor.

**ACC 412C. International Accounting- IFRS Certificate and Research. 3 Hours**

This class includes a comprehensive study of International Financial Reporting Standards (IFRS). Students will complete the Institute of Chartered Accountants in England and Wales' (ICAEW) IFRS learning and assessment program and upon successful completion earn an IFRS certificate from this globally recognized professional accountancy body. Prerequisite(s): ACC 408 or permission of the instructor. Effective Fall 2013: minimum 3.0 cumulative and major gpa required.

**ACC 412D. International Accounting-IFRS Certificate and Research. 3 Hours**

This class is for NON-UD degree seeking students. The class includes a comprehensive study of International Financial Reporting Standards (IFRS). Students will complete the Institute of Chartered Accountants in England and Wales' (ICAEW) IFRS learning and assessment program and upon successful completion earn an IFRS certificate from this globally recognized professional accountancy body. Prerequisite(s): ACC 408 or permission of instructor.

**ACC 420. Federal Income Taxation. 4 Hours**

Study of federal income tax laws and their application to individuals, partnerships, and corporations. Develop research techniques for federal income tax issues as they relate to preparation of federal individual income tax preparation. The historical, social, economic, and political influence on taxation laws are emphasized. Consideration is given to legal, moral, business, and personal factors involved in taxation. Prerequisite(s): ACC 305 with a minimum grade of 'C' or permission of department chairperson.



**ACC 420H. Federal Income Taxation. 4 Hours**

Study of federal income tax laws and their application to individuals, partnerships, and corporations. Develop research techniques for federal income tax issues as they relate to preparation of federal individual income tax preparation. The historical, social, economic, and political influence on taxation laws are emphasized. Consideration is given to legal, moral, business, and personal factors involved in taxation. Prerequisite(s): ACC 305 with a minimum grade of 'C' or permission of department chairperson.

**ACC 421. Taxes and Business Strategy. 3 Hours**

Primary emphasis is given to analyzing tax planning opportunities for individuals and businesses through the use of in-depth tax research projects. This course builds upon the Federal Income Taxation course to further develop tax policy considerations and discusses possible tax reform. The course provides an introduction to several advanced taxation topics including tax exemption organizations, state and local taxation, international taxation and estate and gift taxation. Prerequisite(s): ACC 420 or permission of instructor.

**ACC 441. Accounting Information Systems II. 3 Hours**

Examination of accounting systems with exposure to systems design and evaluation, complex spreadsheet applications, decision support systems, and data base management applications. Prerequisite(s): ACC 341 or permission of instructor.

**ACC 491H. Honors Thesis. 3 Hours**

Selection, design, investigation, and completion of an independent original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of program director and chairperson.

**ACC 492H. Honors Thesis. 3 Hours**

Selection, design, investigation, and completion of an independent original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of program director and chairperson.

**ACC 497. Professional Work Experience. 0-3 Hours**

Supervised accounting work experience in association with a participating public accounting, industrial, commercial, educational, health-care, or governmental organization. May be used for general elective credit only. Option two grading only. Maximum of three credits toward graduation requirements. Permission of chairperson required.

**ACC 499. Independent Study in Accounting. 1-6 Hours**

Individual research in accounting topics under the guidance and direction of an accounting faculty member. A formal, detailed proposal must be completed and approved by the department chair. Prerequisite(s): Senior status in accounting; permission of department chairperson.

## Business Interdisciplinary Studies (BAI)

### Minor in Business Administration (BUS)

Interdisciplinary studies in business are represented by individual courses that are interdisciplinary, such as BAI 150, BAI 151 and BAI 103L, and by the interdisciplinary minor in Business Administration that is offered for students who are not in the School of Business Administration.

BAI 150, BAI 151, and BAI 103L are all required courses for first year students in the School of Business Administration and are part of the business core curriculum.

The minor in Business Administration is a valuable program for non-business majors who intend to pursue careers in business or want to prepare for an MBA program.

The minor in Business Administration is available to non-business majors only. The course requirements are listed below. Note that additional prerequisites may apply to some of the course selections which would increase the total number of hours needed to complete the minor.:

ACC 200	Introduction to Accounting	3
or ACC 207 & ACC 208	Introduction to Financial Accounting and Introduction to Managerial Accounting	
ECO 203	Principles of Microeconomics	3
Select four courses from:		12
FIN 301	Introduction to Financial Management	
MGT 201	Legal Environment of Business	
MGT 301	Organizational Behavior	
MIS 300	Survey of Management Information Systems	
MKT 300	Survey of Marketing	
OPS 300	Introduction to Operations & Supply Management	
Total Hours		18

## Courses

**BAI 103L. Business Computing Laboratory. 1 Hour**

Introduction to business software skills including spreadsheets, relational databases, and integration of computer applications. Overview of UD computer ethics policies.

**BAI 150. Business Educational Planning. 1 Hour**

Introduction to the School of Business Administration, the University, and educational planning.

**BAI 151. Business Integration Experience. 1 Hour**

Integrated introduction to major business processes and decision making.

**BAI 294. Special Topics in the School of Business Administration. 3 Hours**

Special Topics in the School of Business Administration.

**BAI 400. Dean's Leadership Laboratory. 0-3 Hours**

Leadership experience under the supervision of the Dean's office. Permission of Dean's office.

**BAI 497. Laboratory Work Experience. 1-6 Hours**

Under faculty sponsorship and in association with a participating industrial, commercial, educational, health-care, or governmental organization; practical experience in work associated with the student's major or minor concentration. (See internship coordinator for details.) Does not count toward major. Prerequisite(s): Permission of dean.

## Economics and Finance

Majors:

- Bachelor of Science in Business Administration, Business Economics (p. 295)
- Bachelor of Science in Business Administration, Finance (p. 296)
- Bachelor of Science in Business Administration, Finance-Investment Management Emphasis (p. 297)

Minors:

- Business Economics (p. 296)
- Finance (p. 297)

The Department of Economics and Finance offers majors in business economics and in finance for students in the School of Business Administration. Finance majors also have the ability to earn an (optional) emphasis in investment management. The department also offers majors in economics (p. 161) and in applied mathematical economics (p. 204) for students in the College of Arts and Sciences (search these majors to view their requirements.) Minors in economics, business economics and finance are available to all students.

## Faculty

Trevor Collier, Chairperson

Professors: Caporale, Chen, Frasca, Ruggiero

Associate Professors: Collier, Mohan, Poitras, Wang

Assistant Professors: Chang, Haskell, Schutte, Williams, Zhang

Lecturers: Douglas, John, Livesay, Shimmin

## Business Economics

Economics teaches students to think analytically about problems that arise in business, politics, and everyday life. The business economics major offers students the strength of economic theory combined with a focus in an area of applied business and develops the student's quantitative skills by requiring course work in econometrics or forecasting. The major is excellent preparation for a wide range of employment opportunities in business, government and education. It also prepares students for graduate study in law, public policy, and business. Students who wish to pursue graduate study in economics should supplement the major with additional mathematics courses or major in applied mathematical economics.

In addition to other requirements, a major in business economics requires: ECO 203-204 (with a grade of C or better), ECO 340 or 346, ECO 410 or 441, ECO 490, 6 additional semester hours of economics electives, and a breadth requirement, which is a total of 6 additional semester hours of courses in economics electives, or mathematics or business courses from the approved list. See the department office for the approved breadth requirement courses.

## Faculty

Trevor Collier, Chairperson

Edmund B. O'Leary Professor of Economics: Ruggiero

Professors: Caporale, Frasca, Ruggiero

Associate Professors: Collier, Poitras

Assistant Professors: Haskell, Williams

Lecturer: John

## Bachelor of Science in business administration with a major in Business Economics (ECB) Minimum 124 credit hours

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup> 12

HST 103	West and the World
REL 103	Introduction to Religious and Theological Studies
PHL 103	Intro To Philosophy

ENG 100	Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>		0-3
ENG 200	Writing Seminar II	
Oral Communication		3
CMM 100	Principles of Oral Communication	
Mathematics		3
Social Science		3
Arts		3
Natural Sciences <sup>4</sup>		7
Crossing Boundaries		variable credit
Faith Traditions		
Practical Ethical Action		
Inquiry		
Integrative		
Advanced Study		variable credit
Philosophy and/or Religious Studies		
Historical Studies		
Diversity and Social Justice		3
Major Capstone		0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

### SBA Core Curriculum

ACC 207	Introduction to Financial Accounting	3
ACC 208	Introduction to Managerial Accounting	3
BAI 150	Business Educational Planning	1
BAI 103L	Business Computing Laboratory	1
BAI 151	Business Integration Experience	1
DSC 210	Statistics for Business I	3
DSC 211	Statistics for Business II	3
ECO 203	Principles of Microeconomics (Satisfies CAP Social Science)	3
ECO 204	Principles of Macroeconomics	3
ENG 370	Report & Proposal Writing (Satisfies CAP Inquiry)	3
or ENG 371	Technical Communication	
or ENG 372	Business Communication	
FIN 301	Introduction to Financial Management	3
MGT 201	Legal Environment of Business	3
MGT 301	Organizational Behavior	3
MGT 490	Managing the Enterprise (Satisfies CAP Integrative)	3
MTH 128	Finite Mathematics	3
MTH 129	Calculus for Business (Satisfies CAP Mathematics)	3
MIS 301	Information Systems in Organizations	3
MKT 301	Principles of Marketing	3
OPS 301	Survey of Operations & Supply Management	3

PHL 313	Business Ethics (Satisfies CAP Practical Ethical Action and Adv Studies in PHL/REL)	3
or REL 368	Practical wisdom in the business world	
ECO elective (300/400 level)		3
Social Science elective (ANT, POL, PSY, SOC)		3
<b>Major Requirements <sup>1</sup></b>		<b>18</b>
ECO 340	Managerial Economics	3
or ECO 346	Intermediate Microeconomic Analysis	
ECO 410	Bus&Eco Forecasting	3
or ECO 441	Econometrics	
ECO 490	Senior Seminar in Applied Economics (Satisfies CAP Major Capstone) <sup>2</sup>	3
ECO upper level elective (in addition to SBA ECO Upper Level Elective)		3
Breadth requirements (see Department Chair for approved selections)		6

<sup>1</sup> Business economics majors must earn a grade of C or better in ECO 203 and ECO 204.

<sup>2</sup> Beginning in 2015-16, the prerequisite for ECO 490 is ECO 410 or ECO 441.

**Academic Electives to bring total to at least 124 credits**

## Minor in Business Economics (ECB)

### Business Economics

Business Majors		
ECO 340	Managerial Economics	3
or ECO 346	Intermediate Microeconomic Analysis	
ECO 410	Bus&Eco Forecasting	3
or ECO 441	Econometrics	
Select two ECO electives (300/400 level)		6
Total Hours		12

### Non-Business Majors

ECO 203	Principles of Microeconomics	3
ECO 204	Principles of Macroeconomics	3
ECO 340	Managerial Economics	3
or ECO 346	Intermediate Microeconomic Analysis	
ECO 410	Bus&Eco Forecasting	3
or ECO 441	Econometrics	
Select two ECO electives (300/400 level)		6
Total Hours		18

## Finance

The finance major provides students with a working understanding of the financial decision-making process, how financial markets function, and the acquisition and management of capital. A student may choose a general finance curriculum or specialize in courses relating to investment analysis and portfolio management, financial institutions and services, or corporate financial management. Students will be prepared for a variety of careers in business and in the government sector with work in areas such as financial analysis, capital budgeting, banking, mergers and acquisitions, working capital management, real estate and insurance.

A major in finance is also excellent preparation for graduate studies in business administration or corporate and securities law.

In addition to other requirements, the major in finance consists of FIN 360, and FIN 401 or FIN 460; six semester hours of 400 level finance electives; and six additional semester hours of 300 or 400 level finance electives. Finance majors must earn at least a C in FIN 301, Introduction to Financial Management. One of the electives may come from: ACC 305, ECO 415, ECO 488, MTH 490.

### Finance Major with Investment Management Emphasis

The objective of the Investment Management Emphasis is to provide better guidance on finance course selection to our students interested in a career in investment management. Investment management is the professional management of assets on behalf of a client. These assets can be publicly traded securities (stocks, bonds and derivatives), commodities, real estate or foreign currencies. An investment manager acts as a fiduciary agent and her main occupation is to help her clients' meet their specified investment goals. An investment manager can work for or on behalf of a financial institution (insurance companies, mutual funds, hedge funds, pension funds, corporations, brokerage firms, investment banks and non-profits) or a private investor. Money managers, financial advisors, traders and analysts are all part of the investment management industry. The services provided by financial managers include financial statement analysis, asset and portfolio selection, and evaluation of investment performance.

To earn the Investment Management Emphasis, the courses selected for the finance major should fulfill the following three requirements:

1. FIN 470 (Fixed Income Securities) or FIN 480 (Options and Futures Markets),
2. FIN 460 (Portfolio Management and Security Analysis), and
3. One course from the following list (if not already taken):

- FIN 470 (Fixed Income Securities)
- FIN 480 (Options and Futures Markets)
- FIN 479 (Seminar in Bond Portfolio Management)
- FIN 481 (Fundamental and Technical Trading)
- FIN 482 (Energy Markets)
- FIN 484 (Advanced Trading Techniques)
- FIN 493 (Seminar in Investments)

### Faculty

Trevor Collier, Chairperson

William J. Hoben Professor of Finance: Chen  
Professor: Chen

Associate Professors: Mohan, Wang

Assistant Professors: Chang, Schutte, Zhang

Lecturers: Douglas, Livesay, Shimmin

## Bachelor of Science in business administration with a major in Finance (FIN) minimum 124 credit hours

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
HST 103	West and the World

REL 103	Introduction to Religious and Theological Studies	
PHL 103	Intro To Philosophy	
ENG 100	Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>		0-3
ENG 200	Writing Seminar II	
Oral Communication		3
CMM 100	Principles of Oral Communication	
Mathematics		3
Social Science		3
Arts		3
Natural Sciences <sup>4</sup>		7
Crossing Boundaries		variable credit
Faith Traditions		
Practical Ethical Action		
Inquiry		
Integrative		
Advanced Study		variable credit
Philosophy and/or Religious Studies		
Historical Studies		
Diversity and Social Justice		3
Major Capstone		0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

### SBA Core Curriculum

ACC 207	Introduction to Financial Accounting	3
ACC 208	Introduction to Managerial Accounting	3
BAI 150	Business Educational Planning	1
BAI 103L	Business Computing Laboratory	1
BAI 151	Business Integration Experience	1
DSC 210	Statistics for Business I	3
DSC 211	Statistics for Business II	3
ECO 203	Principles of Microeconomics (Satisfies CAP Social Science)	3
ECO 204	Principles of Macroeconomics	3
ENG 370	Report & Proposal Writing (Satisfies CAP Inquiry)	3
or ENG 371	Technical Communication	
or ENG 372	Business Communication	
FIN 301	Introduction to Financial Management	3
MGT 201	Legal Environment of Business	3
MGT 301	Organizational Behavior	3
MGT 490	Managing the Enterprise (Satisfies CAP Integrative)	3
MTH 128	Finite Mathematics	3
MTH 129	Calculus for Business (Satisfies CAP Mathematics)	3
MIS 301	Information Systems in Organizations	3

MKT 301	Principles of Marketing	3
OPS 301	Survey of Operations & Supply Management	3
PHL 313	Business Ethics (Satisfies CAP Practical Ethical Action and Adv Studies in PHL/REL)	3
or REL 368	Practical wisdom in the business world	
ECO elective (300/400 level)		3
Social Science elective (ANT, POL, PSY, SOC)		3

<b>Major Requirements</b>		<b>18</b>
FIN 360	Investments	3
Select two FIN electives (400 level)		6
FIN major capstone course (choose from FIN 479 or FIN 493 to satisfy CAP Major Capstone)		3
Select two FIN electives (300-400 level), one may be from:		6
ACC 305	Intermediate Financial Accounting I Part I	
ECO 415	Game Theory with Business Applications	
ECO 488	Production Economics & Performance Evaluation	
MTH 490	Readings in Mathematics	

Finance majors must earn a grade of C or better in FIN 301.

### Academic Electives to bring total to at least 124 credits

## Minor in Finance (FIN)

### Finance

Business Majors		
FIN 360	Investments	3
Select three FIN electives (at least one at the 400 level)		9
Total Hours		12

### Non-Business Majors

FIN 301	Introduction to Financial Management <sup>1</sup>	3
FIN 360	Investments	3
Select three FIN electives (at least one at the 400 level)		9
Total Hours		15

<sup>1</sup> Prerequisites for FIN 301 must be completed.

- Business Economics (p. 297)
- Finance (p. 298)
- Finance with Investment Management Emphasis (p. 297)

## Business ECONOMICS

First Year	Hours
BAI 150	1
BAI 151	1
BAI 103L	1
ENG 100 (CAP Humanities Commons)	3
HST 103 (CAP Humanities Commons)	3
PHL 103 (CAP Humanities Commons)	3



REL 103 (CAP Humanities Commons)	3
MTH 128	3
MTH 129 (Satisfies CAP Mathematics)	3
CMM 100 (Satisfies CAP Oral Communication)	3
CAP components (generally CAP Arts & CAP Natural Science)	10
	<b>34</b>

<b>Second Year</b>	<b>Hours</b>
CAP Second Year Writing Seminar	3
CAP Social Science	3
ACC 207	3
ACC 208	3
DSC 210	3
DSC 211	3
ECO 203 (grade of C or better required for ECB majors)	3
ECO 204 (grade of C or better required for ECB majors)	3
MGT 201	3
CAP components	3

	<b>30</b>
<b>Third Year</b>	<b>Hours</b>
FIN 301	3
MGT 301	3
MIS 301	3
MKT 301	3
OPS 301	3
ENG 370, 371, or 372 (Satisfies CAP Inquiry)	3
ECO 340 or 346	3
ECO 410 or 441	3
ECB major breadth elective	3
CAP Components or General Electives	3

	<b>30</b>
<b>Fourth Year</b>	<b>Hours</b>
ECO elective (satisfies economics elective for ECB major)	6
ECB major breadth elective	3
ECO 490 (Satisfies CAP Major Capstone)	3
PHL 313 or REL 368 (Satisfies CAP Practical Ethical Action and ADV Studies in PHL/REL)	3
MGT 490 (Satisfies CAP Integrative)	3

CAP Components or General Electives	12
	<b>30</b>

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Total credit hours: 124

## FINANCE

<b>First Year</b>	<b>Hours</b>
BAI 150	1
BAI 151	1
BAI 103L	1
ENG 100 (CAP Humanities Commons)	3
HST 103 (CAP Humanities Commons)	3
PHL 103 (CAP Humanities Commons)	3
REL 103 (CAP Humanities Commons)	3
MTH 128	3
MTH 129 (Satisfies CAP Mathematics)	3
CMM 100 (Satisfies CAP Oral Communication)	3
CAP components (generall CAP Arts & CAP Natural Sciences)	10
	<b>34</b>

<b>Second Year</b>	<b>Hours</b>
CAP Second Year Writing Seminar	3
CAP Social Science	3
ACC 207	3
ACC 208	3
DSC 210	3
DSC 211	3
ECO 203	3
ECO 204	3
MGT 201	3
CAP components	3

	<b>30</b>
<b>Third Year</b>	<b>Hours</b>
FIN 301 (grade of C or better for FIN majors)	3
MGT 301	3
MIS 301	3
OPS 301	3
MKT 301	3
ENG 370, 371, or 372 (Satisfies CAP Inquiry)	3
FIN 360	3
FIN elective (see major reqs for choices)	3

CAP Components or  
General Electives

6

**30**

**Fourth Year Hours**

ECO 300 or 400 level  
elective

3

FIN electives (see major  
reqs for choices)

9

PHL 313 or REL 368  
(Satisfies CAP Practical  
Ethical Action and ADV  
Studies in PHL/REL)

3

FIN 401 or 460

3

MGT 490 (Satisfies CAP  
Integrative)

3

CAP Components or  
General Electives

9

\*See DegreeWorks to  
ensure one of FIN courses  
taken is an approved Major  
Capstone course.

**30**


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Total credit hours: 124

## Finance with investment management emphasis

**First Year Hours**

BAI 150

1

BAI 151

1

BAI 103L

1

ENG 100 (CAP Humanities  
Commons)

3

HST 103 (CAP Humanities  
Commons)

3

PHL 103 (CAP Humanities  
Commons)

3

REL 103 (CAP Humanities  
Commons)

3

MTH 128

3

MTH 129 (Satisfies CAP  
Mathematics)

3

CMM 100 (Satisfies CAP  
Oral Communication)

3

CAP components (generally  
CAP Arts & CAP Natural  
Sciences)

**34**

**Second Year Hours**

CAP Second Year Writing  
Seminar

3

CAP Social Science

3

ACC 207

3

ACC 208

3

DSC 210

3

DSC 211

3

ECO 203

3

ECO 204

3

MGT 201

3

CAP components

**30**

**Third Year Hours**

FIN 301 (grade of C or  
better for FIN majors)

3

MGT 301

3

MIS 301

3

OPS 301

3

MKT 301

3

ENG 370, 371, or 372  
(Satisfies CAP Inquiry)

3

FIN 360

3

FIN elective (see major  
requirements for choices)

3

CAP Components or  
General Electives

6

**30**

**Fourth Year Hours**

ECO 300 or 400 level  
elective

3

FIN 460

3

FIN 470 or 480

3

FIN elective from the  
Investment Management list

3

FIN elective (see major  
requirements for choices)

3

PHL 313 or REL 368  
(Satisfies CAP Practical  
Ethical Action and ADV  
Studies in PHL/REL)

3

MGT 490 (Satisfies CAP  
Integrative)

3

CAP Components or  
General electives

9

\*See DegreeWorks to  
ensure one of FIN courses  
taken is an approved Major  
Capstone course.

**30**


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Total credit hours: 124

## Economics Courses

### ECO 203. Principles of Microeconomics. 3 Hours

An introduction to consumer and producer behavior in a market economy, demand and supply, pricing and firm behavior under perfect and imperfect competition, and the distribution of income. Discussion of current topics in microeconomics may be included.

### ECO 203H. Principles of Microeconomics. 3 Hours

An introduction to consumer and producer behavior in a market economy, demand and supply, pricing and firm behavior under perfect and imperfect competition, and the distribution of income. Discussion of current topics in microeconomics may be included.

**ECO 204. Principles of Macroeconomics. 3 Hours**

Introductory economic analysis of the macroeconomy; the determination of gross national product, employment, inflation and the interest rate in the U.S. economy. Government policy, money and banking, and international trade are analyzed.

**ECO 204H. Principles of Macroeconomics. 3 Hours**

Introductory economic analysis of the macroeconomy; the determination of gross national product, employment, inflation and the interest rate in the U.S. economy. Government policy, money and banking, and international trade are analyzed.

**ECO 301. Seminar in Market Economics. 3 Hours**

Market solutions to economic and political issues. Topics vary, but may include issues relating to drugs, gun control, environmental concerns, government interventions, economic and political freedom, and others. Team taught course. Prerequisite(s): ECO 203.

**ECO 340. Managerial Economics. 3 Hours**

Application of economic models to managerial decision making. Topics include demand analysis, forecasting demand, short-run cost analysis, long-run cost and production functions, pricing, and risk and uncertainty. May not get credit for both ECO 340 and ECO 346. Prerequisite(s): ECO 203.

**ECO 346. Intermediate Microeconomic Analysis. 3 Hours**

Analysis of the theory of consumer behavior, production theory, equilibrium of the firm, price determination in various market structures, distribution of income, allocation of resources, and welfare economics. May not get credit for both ECO 346 and ECO 340. Prerequisite(s): ECO 203.

**ECO 347. Intermediate Macroeconomic Analysis. 3 Hours**

National income accounting and the determination of the level of income and employment; classical, Keynesian, and post-Keynesian models; private, government, and foreign sectors; theories of inflation and economic growth. Prerequisite(s): ECO 204; ECO 203 .

**ECO 390. Antitrust Economics. 3 Hours**

Study of how economic analysis has been applied in the interpretation of the antitrust statutes. Examines major anti-trust laws and relevant case law; reviews economic theories of market behavior. Prerequisite(s): ECO 203.

**ECO 410. Business & Economic Forecasting. 3 Hours**

Forecasting techniques, including ARIMA time series models, econometric models, moving averages, exponential smoothing, and time series decomposition, are used to forecast business and economic variables. Data sources, selection of appropriate forecasting tools and models, and evaluation of forecast results are studied. Prerequisite(s): ECO 203, ECO 204; Statistics (DSC 211 or MTH 207 or MTH 367 or MTH 412).

**ECO 415. Game Theory with Business Applications. 3 Hours**

Introductory course in strategic decision making; provides a thorough discussion of the basic techniques of applied game theory and of systematic thinking in making business decisions. Among the topics covered with applications to business are equilibrium strategies, understanding situations involving conflict and cooperation, auction design and bidding strategy, and bargaining and negotiations. Prerequisite(s): ECO 203.

**ECO 435. Economics of the Environment. 3 Hours**

Introduction to the economics of the global environment including an analysis of market failure as a cause of environmental degradation. Topics covered include cost-benefits analysis, criteria for public investment, regulation of the environment, and the sustainable global environment. Prerequisite(s): ECO 203.

**ECO 441. Econometrics. 3 Hours**

Training in the art of making economic measurements from empirical data using regression analysis as the principle tool; use of computer software to estimate and test regression equations; interpretation of results using statistical inference. Prerequisite(s): ECO 203, ECO 204,[one of the following DSC 211, MTH 207, MTH 367, or MTH 412].

**ECO 442. Money & Banking. 3 Hours**

Principles of money and monetary systems; commercial banking and the role of the Federal Reserve System; monetary theory and policy; the mechanism of international payments. Prerequisite(s): ECO 203, ECO 204.

**ECO 445. Public Finance. 3 Hours**

The economic aspects of government finance at the local, state, and especially the national level; the behavioral effects of various taxes, efficiency in spending, the changing role of the U.S. government, fiscal policy, and intergovernmental revenue and expenditure programs; emphasis on relating analytical tools to current developments. Prerequisite(s): ECO 203, ECO 204.

**ECO 460. Economic Development & Growth. 3 Hours**

Study of various dynamic economic theories of growth and structural change; the role of particular factors of production and related noneconomic variables in the development process, primarily, though not exclusively, of Third World nations. Prerequisite(s): ECO 203, ECO 204.

**ECO 460H. Economic Development & Growth. 3 Hours**

Study of various dynamic economic theories of growth and structural change; the role of particular factors of production and related noneconomic variables in the development process, primarily, though not exclusively, of Third World nations. Prerequisite(s): ECO 203, ECO 204.

**ECO 461. International Economics. 3 Hours**

Major issues surrounding international trade and finance, the economic interdependence of nations and businesses, essential theoretical and empirical tools necessary to monitor and analyze international economic phenomena, and the application of these tools to contemporary business problems and issues. Prerequisite(s): ECO 203, ECO 204.

**ECO 471. Labor Economics. 3 Hours**

Theory of labor supply and demand, human capital theory, and the process by which wages are determined in various factor markets; applications to topics of unemployment, unions, migration, discrimination, and skill differentials. Prerequisite(s): ECO 203, ECO 204.

**ECO 480. Sports Economics. 3 Hours**

The application of economic analysis to the sports industry. Examines demand and efficiency in the product market; the labor market for professional athletes and mechanisms for restricting competition in that market; problems in achieving an efficient allocation of resources in the sports industry. Prerequisite(s): ECO 203.

**ECO 480H. Sports Economics. 3 Hours**

The application of economic analysis to the sports industry. Examines demand and efficiency in the product market; the labor market for professional athletes and mechanisms for restricting competition in that market; problems in achieving an efficient allocation of resources in the sports industry. Prerequisite(s): ECO 203; (DSC 211 or MTH 207) or equivalent.

**ECO 485. Urban & Regional Economics. 3 Hours**

Treatment of certain theoretical concepts such as location theory and theories of land use and land rent; an economic interpretation for the existence of cities; applying economic analysis to the problems of traffic congestion, pollution, race, poverty, and urban sprawl. Prerequisite(s): ECO 203.

**ECO 488. Production Economics & Performance Evaluation. 3 Hours**

Intermediate course in theoretical and applied microeconomic production theory; provides a thorough discussion of the basic techniques of applied production theory and performance evaluation of decision making units. Topics include returns to scale, technical and allocative efficiency, benchmarking, environmental costs, and programming. Prerequisite(s): ECO 203.

**ECO 490. Senior Seminar in Applied Economics. 3 Hours**

Economic analysis applied in an area of topical interest chosen by the instructor; includes the application of theoretical, mathematical, and statistical methods mastered in previous economics courses. This capstone course provides students an opportunity to extend their proficiency in economic analysis through application and discussion in a small group setting. Typically offered during the spring semester. Economics or Business Economics majors only. Prerequisite(s): Twelve semester hours in Economics.

**ECO 491H. Honors Thesis. 3 Hours**

Selection, design, investigation, and completion of an independent original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of the director of the program and the departmental chairperson.

**ECO 492H. Honors Thesis. 3 Hours**

Selection, design, investigation, and completion of an independent original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of the director of the program and the departmental chairperson.

**ECO 494. Seminar. 3 Hours**

Subject varies from time to time. May be taken more than once if topic changes. Prerequisites to be announced.

**ECO 496. Cooperative Education. 3 Hours**

Optional full-time work period off campus alternating with study period on campus. (See Chapter X; consult Cooperative Education Office for details.) Does not count toward economics major. Permission of chairperson required. Economics or Business Economics majors only. Prerequisite(s): Permission of department chairperson.

**ECO 497. Internship for General Elective Credit. 1-3 Hours**

Practical work experience associated with career development and career exploration relating to the student's major. Permission of the department chair or designee required. Does not replace economics courses for the economics major. Economics or Business Economics majors only. Prerequisite(s): Forty-five semester hours of credit.

**ECO 498. Independent Study in Economics. 1-6 Hours**

Directed readings and research in selected fields of economics. The number of semester hours will depend on the amount of work chosen. The course will involve periodic discussions with faculty and other students in the course. May be taken more than once for additional credit. Prerequisite(s): 3.0 GPA in economics with a minimum of nine semester hours in economics; nomination by faculty; permission of the department chairperson.

**Finance Courses****FIN 250. Personal Finance. 3 Hours**

Principles and techniques for handling personal financial decisions: personal budgeting, obtaining credit, life and casualty insurance, buying a home, buying an automobile, and savings and investments. For both business and nonbusiness majors. Does not count toward the finance major.

**FIN 301. Introduction to Financial Management. 3 Hours**

Principles and techniques used by business firms in managing and financing their current and fixed assets; sources of funds within the capital markets; determinants of the financial structure; analytical techniques. Prerequisite(s): (ACC 200 or ACC 207 or [ACC 300A and ACC 300B]); (ECO 203 or 204).

**FIN 301H. Introduction to Financial Management. 3 Hours**

Principles and techniques used by business firms in managing and financing their current and fixed assets; sources of funds within the capital markets; determinants of the financial structure; analytical techniques. Prerequisite(s): (ACC 200 or ACC 207 or ACC 301); ECO 203; junior standing.

**FIN 315. Spreadsheet Modeling in Finance. 3 Hours**

This lab course focuses on building financial models in Excel. Students will learn to construct models for practical, real-world applications that cover simple examples such as cash flow and ratio analysis to more complicated models of bond pricing, stock valuation and option pricing. In the process, students will master basic Excel skills and more advanced useful techniques. Prerequisite(s): FIN 301.

**FIN 330. Insurance & Risk Management. 3 Hours**

Study of the basic concepts of business and personal risks from the standpoint of creation, identification, reduction, elimination, and evaluation of risks; the use of insurance in meeting problems of risk. Prerequisite(s): FIN 301.

**FIN 336. Principles of Real Estate. 3 Hours**

Survey of real estate industry with emphasis on its structure, regulation, growth, needs, financing, and future. Analysis of the methods for determining land use and evaluation of the theories of city development. Prerequisite(s): FIN 301.

**FIN 340. Personal Financial Consulting. 3 Hours**

This course introduces students to the concepts and practical implementation of professional financial planning, with a focus on the fundamentals of asset and income protection, capital accumulation, retirement planning, and estate planning. Emphasis is on integrating these elements into a comprehensive personal financial plan. The course also addresses client interactions, professional ethics and standards, the regulatory environment, and the business of financial planning. Prerequisite(s): FIN 301.

**FIN 360. Investments. 3 Hours**

The principles and techniques used by the investor in selecting securities, emphasis on the stock and bond markets; security valuation methods leading to the selection of individual issues; portfolio theory. Prerequisite(s): FIN 301 with minimum grade of C.

**FIN 371. Financial Markets & Institutions. 3 Hours**

Study of financial markets and financial institutions, including the Federal Reserve, interest rate theories, money and capital market securities, interest rate futures, options and swaps, international financial markets, such as commercial banking, insurance, and investment banking. Prerequisite(s): FIN 301 with minimum grade of C.



**FIN 401. Advanced Financial Analysis. 3 Hours**

Advanced study of current developments in financial planning, acquisition of funds, and asset management valuation; policy strategy and techniques in financial decision making. Prerequisite(s): FIN 301 with minimum grade of C.

**FIN 402. Mergers, Acquisitions, Capital Restructuring & Corporate Governance. 3 Hours**

In depth study of company valuation techniques and the influence of the governance structure - the CEO, President, and the Board of Directors - on company value. Prerequisite(s): FIN 360.

**FIN 450. International Business Finance. 3 Hours**

Introduction to problems facing financial management of international companies, including foreign exchange risk, working capital and capital budgeting decisions for multinational corporations, international financing, accounting and control. Prerequisite(s): FIN 301 with minimum grade of C.

**FIN 460. Portfolio Management & Security Analysis. 3 Hours**

Advanced valuation theory and security analysis; portfolio construction, evaluation, and management. Prerequisite(s): FIN 360.

**FIN 470. Fixed Income Securities. 3 Hours**

Introduction to the analytical/computational techniques for pricing fixed income securities, interest rate derivatives, and implementing effective portfolio strategies to control interest rate risk and enhance return. Prerequisite(s): FIN 360 or FIN 371.

**FIN 471. Management of Financial Institutions. 3 Hours**

Integrated and comprehensive analysis of financial institutions that include depository institutions, insurance companies, securities firms, and investment companies. Prerequisite(s): FIN 371.

**FIN 475. Commercial Bank Management. 3 Hours**

Explores the environment in which banks must operate, the financial statements of banks, and a thorough study of bank management topics which include: asset-liability management, the investment portfolio, sources of funds, and the loan portfolio. Prerequisite(s): FIN 360 or FIN 371.

**FIN 479. Seminar in Bond Portfolio Management. 3 Hours**

Theory and practice in active bond portfolio management. Literature and practical issues related to managing a bond fund. Seminar format; students are divided into teams, each responsible for a specific sector of the fixed income market. Prerequisite(s): FIN 360 or FIN 371.

**FIN 480. Options & Futures Markets. 3 Hours**

Study of options, futures, and other derivatives fundamentals, trading strategies, hedging, speculation, and arbitrating, pricing theories, and market regulations. Prerequisite(s): FIN 360 or FIN 371.

**FIN 481. Introduction to Technical Trading. 3 Hours**

The art and science of speculative foreign exchange trading, focusing on spot trading of Euros. Students implement a trading plan in a real foreign exchange environment under a set risk management policy. Students learn to watch the market, analyze profitable situations, and produce winning trades. Prerequisite(s): FIN 360.

**FIN 481L. Trading Laboratory. 1 Hour**

Prepares students to find positions in proprietary funds, hedge funds, and energy or commodity firms. Focuses on effective communication, résumé writing, interviewing techniques, job negotiation techniques, and the optimal use of e-mail and personal networks and references. Prerequisite(s): FIN 481 or FIN 482 (may be taken as a corequisite).

**FIN 482. Energy Markets. 3 Hours**

Energy market portfolio skills: physicality of natural gas market, natural gas pricing, natural gas portfolio transactions including hedging, basic risk management. VaR simulation produced, power pricing and risk management, weather hedging, credit derivatives and their use in energy. Oil basics and pricing a tolling agreement. Prerequisite(s): FIN 360.

**FIN 484. Advanced Trading Techniques. 3 Hours**

Topics include appropriate leverage, when to take profits, when to have a stop loss, and hedging strategies. Students will learn to write short-term trading plans encompassing fundamental news events and technical charting, then implement a longer view. Each student is expected to open a real micro account from \$300-\$500. Prerequisite(s): FIN 481.

**FIN 490. Special Topics in Finance. 3 Hours**

Subject varies from time to time. May be taken more than once if the topic changes. Prerequisite(s): FIN 301.

**FIN 491H. Honors Thesis. 3 Hours**

Selection, design, investigation, and completion of an independent original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of the director of the program and the departmental chairperson.

**FIN 492H. Honors Thesis. 3 Hours**

Selection, design, investigation, and completion of an independent original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of the director of the program and the departmental chairperson.

**FIN 493. Seminar in Investments. 3 Hours**

Application of investment theory and techniques in a real-world setting. Students manage a funded portfolio in terms of establishing objectives, selecting securities to buy (sell), and evaluating portfolio performance. Emphasis is placed upon attempting to identify undervalued common stocks. Admission to the course is limited and must be approved by the instructor. Prerequisite(s): FIN 360 and permission of department chair.

**FIN 496. Cooperative Education. 3 Hours**

Optional full-time work period off campus alternating with study period on campus. (See Chapter X; consult Cooperative Education Office for details.) Does not count toward finance major. Finance majors only. Prerequisite(s): Permission of department chairperson.

**FIN 497. Internship for General Elective Credit. 1-3 Hours**

Practical work experience associated with career development and career exploration relating to the student's major. Permission of department chair or designee required. Does not replace finance courses for the finance major. Finance majors only. Prerequisite(s): Forty-five semester hours of credit.

**FIN 498. Independent Study in Finance. 1-6 Hours**

Directed readings and research in selected fields of finance. The number of semester hours will depend on the amount of work chosen. The course will involve periodic discussions with other students and faculty in the program. May be taken more than once for additional credit. Prerequisite(s): 3.0 GPA in Finance; minimum of nine semester hours in Finance; nomination by faculty; permission of department chairperson.

## Management and Marketing

Majors:

- Bachelor of Science in Business Administration, Entrepreneurship (p. 303)

- Bachelor of Science in Business Administration, International Business Management-Global Markets Emphasis
- Bachelor of Science in Business Administration, International Business Management-Human Resources Emphasis (p. 305)
- Bachelor of Science in Business Administration, Marketing (p. 307)
- Bachelor of Science in Business Administration, Marketing-Sales Management Emphasis (p. 307)
- Bachelor of Science in Business Administration, Marketing-Product Innovation Emphasis (p. 307)

#### Minors:

- Entrepreneurship (p. 304)
- International Business Management (p. 306)
- Marketing (p. 307)

The Management program offered by the Management/Marketing Department includes a major or minor in two distinct areas: International Business Management and Entrepreneurship. The department also offers a major or a minor in Marketing.

#### Faculty

Jay Janney, Chairperson

Professors: Bickford, King, Sweeney

Associate Professors: Janney, Kiewitz, Lau, Sullivan

Assistant Professors: Kenworthy, Meek

Lecturers: Chelle, Forlani, Gentner, Miller

Adjunct Faculty: Allen, Brady, Cothrel, Dudon, Hurtado, June, Kohls, Lewis, Sandner, Wood, Zavakos

## Entrepreneurship

Students majoring or minoring in Entrepreneurship will develop an understanding of how a business enterprise is conceived, launched and sustained. The curriculum teaches students how to identify viable business opportunities and explores how such opportunities are transformed into new ventures. Additional emphasis is placed on how entrepreneurial ventures:

- Successfully compete for financial resources
- Successfully identify and reach their target markets
- Successfully establish business processes, systems, and controls to manage small and growth-oriented ventures.

Students must apply to and be accepted as an Entrepreneurship major. The admissions process is selective and occurs in the spring semester. The Entrepreneurship major curriculum begins with a two-course sequence in MGT 220 and 221 (taken over an academic year), after which students take MGT 320 and MGT 321 (these latter two courses must be taken together and are only offered in fall semester). This sequencing of courses means it is very important for students interested in majoring in Entrepreneurship to pay attention to the admissions process. Non-SBA students interested in the Entrepreneurship major cannot be admitted until they are officially transferred into the SBA.

A key feature of the Entrepreneurship major is the Sophomore Experience in which student teams create micro-businesses and actually run them during their sophomore year. This experience is directed through the Crotty Center for Entrepreneurial Leadership and includes seminars with faculty and entrepreneurs who work with students to develop the essential knowledge, skills, and abilities for successfully running a micro-business. Another key feature is the senior capstone

seminar in which students work as consultants with an entrepreneur to solve an actual problem within an existing entrepreneurial business. Entrepreneurship majors can also participate in the:

- Everest Real Estate Challenge (open to ENT majors only)
- Flyer Angels (a student-run angel fund open to ENT majors only)
- the UD Business Plan Competition (open to all students, see <http://www.udayton.edu/business/udbpc/>)

Students can also obtain a minor in Entrepreneurship. For both business and non-business majors, the minor in Entrepreneurship consists of twelve semester hours. The minor is designed to be achievable without prerequisites.

## Bachelor of Science in business administration with a major in Entrepreneurship (ENT) minimum of 124 credit hours

#### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
HST 103	West and the World
REL 103	Introduction to Religious and Theological Studies
PHL 103	Intro To Philosophy
ENG 100	Writing Seminar I <sup>2</sup>
Second-Year Writing Seminar <sup>3</sup>	0-3
ENG 200	Writing Seminar II
Oral Communication	3
CMM 100	Principles of Oral Communication
Mathematics	3
Social Science	3
Arts	3
Natural Sciences <sup>4</sup>	7
Crossing Boundaries	variable credit
Faith Traditions	
Practical Ethical Action	
Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

#### SBA Core Curriculum

ACC 207	Introduction to Financial Accounting	3
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ACC 208	Introduction to Managerial Accounting	3
BAI 150	Business Educational Planning	1
BAI 103L	Business Computing Laboratory	1
BAI 151	Business Integration Experience	1
DSC 210	Statistics for Business I	3
DSC 211	Statistics for Business II	3
ECO 203	Principles of Microeconomics (Satisfies CAP Social Science)	3
ECO 204	Principles of Macroeconomics	3
ENG 370	Report & Proposal Writing (Satisfies CAP Inquiry)	3
or ENG 371	Technical Communication	
or ENG 372	Business Communication	
FIN 301	Introduction to Financial Management	3
MGT 201	Legal Environment of Business	3
MGT 301	Organizational Behavior	3
MGT 490	Managing the Enterprise (Satisfies CAP Integrative)	3
MTH 128	Finite Mathematics	3
MTH 129	Calculus for Business (Satisfies CAP Mathematics)	3
MIS 301	Information Systems in Organizations	3
MKT 301	Principles of Marketing	3
OPS 301	Survey of Operations & Supply Management	3
PHL 313	Business Ethics (Satisfies CAP Practical Ethical Action and Adv Studies in PHL/REL)	3
or REL 368	Practical wisdom in the business world	
ECO elective (300/400 level)		3
Social Science elective (ANT, POL, PSY, SOC)		3
<b>Major Requirements</b>		18
MGT 220	Entrepreneurship Sophomore Experience I (Must be taken first semester Sophomore Year)	2
MGT 221	Entrepreneurship Sophomore Experience II (Must be taken second semester Sophomore Year)	1
MGT 320	New Venture Creation	3
MGT 321	Financing Entrepreneurial Ventures	3
MGT 430	Senior Seminar in Entrepreneurship (Satisfies CAP Major Capstone)	3
Select two courses from:		6
MGT 402	Leadership & Motivation	
MKT 412	Advanced Selling Skills in High Technology Industries	
MGT 420	Entrepreneurial Marketing	
MGT 421	Small Business Management	
MGT 422	Business Plans for Emerging Firms	
MGT 423	Human Resource Management in the Emerging Firm	
MGT 424	Family Business Management	
MGT 425	Franchising	
MGT 429	Current Issues in Entrepreneurship	
MKT 435	New Product Development	

Academic Electives to bring total to at least 124 credits

## Minor in Entrepreneurship (ENT)

### Entrepreneurship

Business Majors		
MGT 318	Fundamentals of New Venture Creation	3
MGT 319	Fundamentals of Entrepreneurial Finance	3
Select two courses from: <sup>1</sup>		6
MGT 402	Leadership & Motivation	
MKT 412	Advanced Selling Skills in High Technology Industries	
MGT 420	Entrepreneurial Marketing	
MGT 421	Small Business Management	
MGT 422	Business Plans for Emerging Firms	
MGT 423	Human Resource Management in the Emerging Firm	
MGT 424	Family Business Management	
MGT 425	Franchising	
MGT 429	Current Issues in Entrepreneurship	
MKT 435	New Product Development	
Total Hours		12

<sup>1</sup> A student minoring in entrepreneurship may petition the department chair to substitute other management courses in place of one, but not two, of these electives. The request will be considered in light of the student's overall academic program and career intention. It is recommended that the student speak to the department to determine the course offerings schedule.

### Non-Business Majors

MGT 318	Fundamentals of New Venture Creation	3
MGT 319	Fundamentals of Entrepreneurial Finance	3
MGT 301	Organizational Behavior	3
or MGT 201	Legal Environment of Business	
or MKT 300	Survey of Marketing	
Select one course from:		3
MGT 402	Leadership & Motivation	
MKT 412	Advanced Selling Skills in High Technology Industries	
MGT 420	Entrepreneurial Marketing	
MGT 421	Small Business Management	
MGT 422	Business Plans for Emerging Firms	
MGT 423	Human Resource Management in the Emerging Firm	
MGT 424	Family Business Management	
MGT 425	Franchising	
MGT 429	Current Issues in Entrepreneurship	
MKT 435	New Product Development	
Total Hours		12

## International Business Management

Students majoring in International Business Management (IBM) will build global leadership competencies by acquiring a deeper understanding of global business and cultural practices while at the same time building a leadership skill set. Upon graduation, students will possess a breadth of business knowledge and abilities enabling them to assess complex

problems in global business settings and to lead the implementation of effective, innovative and transformative solutions.

#### Features of Major:

- Exposure to international business academic training
- Bookend experience that launches students into the major and concludes with an experiential learning experience
- Leadership skills built via coursework, hands-on exercises, examination of personal assets/strengths and putting both into practice with application of knowledge and skills to applied problems.
- Project management skills obtained by working on case studies and hands-on projects throughout the major
- A required on-the-ground international learning experience while completing the major

#### Emphasis in Global Markets or Human Resource Management

IBM students must choose either the Global Markets Emphasis or Human Resource Management Emphasis. The Global Markets Emphasis is best suited for students who wish to pursue the highest level of global literacy and understanding of international markets in terms of opportunities to sell and buy goods and services. The Human Resource Management Emphasis is best suited for students who wish to focus their major on further development of leadership and management skills that best help organizations to position, motivate, and reward human capital globally.

## Bachelor of science in Business Administration with a major in International Business Management (ibm) minimum of 124 credit hours

#### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
HST 103 West and the World	
REL 103 Introduction to Religious and Theological Studies	
PHL 103 Intro To Philosophy	
ENG 100 Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>	0-3
ENG 200 Writing Seminar II	
Oral Communication	3
CMM 100 Principles of Oral Communication	
Mathematics	3
Social Science	3
Arts	3
Natural Sciences <sup>4</sup>	7
Crossing Boundaries	variable credit
Faith Traditions	
Practical Ethical Action	
Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	

#### Historical Studies

Diversity and Social Justice	3
Major Capstone	0-3

- <sup>1</sup> Completed with ASI 110 and ASI 120.
- <sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.
- <sup>3</sup> Completed with ENG 200H or ASI 120.
- <sup>4</sup> Must include two different disciplines and accompanying lab.

#### SBA Core Curriculum

ACC 207	Introduction to Financial Accounting	3
ACC 208	Introduction to Managerial Accounting	3
BAI 150	Business Educational Planning	1
BAI 103L	Business Computing Laboratory	1
BAI 151	Business Integration Experience	1
DSC 210	Statistics for Business I	3
DSC 211	Statistics for Business II	3
ECO 203	Principles of Microeconomics (Satisfies CAP Social Science)	3
ECO 204	Principles of Macroeconomics	3
ENG 370	Report & Proposal Writing (Satisfies CAP Inquiry)	3
or ENG 371	Technical Communication	
or ENG 372	Business Communication	
FIN 301	Introduction to Financial Management	3
MGT 201	Legal Environment of Business	3
MGT 301	Organizational Behavior	3
MGT 490	Managing the Enterprise (Satisfies CAP Integrative)	3
MTH 128	Finite Mathematics	3
MTH 129	Calculus for Business (Satisfies CAP Mathematics)	3
MIS 301	Information Systems in Organizations	3
MKT 301	Principles of Marketing	3
OPS 301	Survey of Operations & Supply Management	3
PHL 313	Business Ethics (Satisfies CAP Practical Ethical Action and Adv Studies in PHL/REL)	3
or REL 368	Practical wisdom in the business world	
ECO elective (300/400 level)		3
Social Science elective (ANT, POL, PSY, SOC)		3

#### Major Requirements

INB 302	Survey of International Business	3
MGT 403	Cross-Cultural Management	3
INB 450	Seminar in Current Global Issues	3
International learning experience requirement		
Global Markets Emphasis or Human Resource Management Emphasis		9

Select on emphasis from:

#### Global Markets Emphasis

Select two courses from:		6
INB 350	Doing Business in Emerging Markets	
INB 351	Doing Business in Latin America	
INB 352	Doing Business in Asia	



INB 353	Doing Business in Europe	
INB 354	Doing Business in Africa	
INB 357	Export Management	
Select one course from:		3
ACC 412	International Accounting	
FIN 450	International Business Finance	
MKT 440	Global Marketing	
OPS 480	Supply Chain Management Strategies	

**Human Resource Management Emphasis**

MGT 350	Managerial Skills	3
MGT 423	Human Resource Management in the Emerging Firm	3
Select one course from:		3
MGT 402	Leadership & Motivation	
MGT 404	Group Dynamics, Team Processes & Decision Making	
MGT 405	Employee Training & Development	

## Minor in International Business Management (IBM)

**International Business Management**

Business Majors		
INB 302	Survey of International Business	3
MGT 403	Cross-Cultural Management	3
Select two courses from:		6
ACC 412	International Accounting	
FIN 450	International Business Finance	
INB 350	Doing Business in Emerging Markets	
INB 351	Doing Business in Latin America	
INB 352	Doing Business in Asia	
INB 353	Doing Business in Europe	
INB 354	Doing Business in Africa	
INB 357	Export Management	
MGT 350	Managerial Skills	
MGT 402	Leadership & Motivation	
MGT 404	Group Dynamics, Team Processes & Decision Making	
MGT 405	Employee Training & Development	
MGT 423	Human Resource Management in the Emerging Firm	
MKT 440	Global Marketing	
OPS 480	Supply Chain Management Strategies	
Total Hours		12

Non-Business Majors		
MGT 301	Organizational Behavior	3
INB 302	Survey of International Business	3
MGT 403	Cross-Cultural Management	3
Select two courses from (pre-requisites may apply):		6
ACC 412	International Accounting	
FIN 450	International Business Finance	
INB 350	Doing Business in Emerging Markets	

INB 351	Doing Business in Latin America	
INB 352	Doing Business in Asia	
INB 353	Doing Business in Europe	
INB 354	Doing Business in Africa	
INB 357	Export Management	
MGT 350	Managerial Skills	
MGT 402	Leadership & Motivation	
MGT 404	Group Dynamics, Team Processes & Decision Making	
MGT 405	Employee Training & Development	
MGT 423	Human Resource Management in the Emerging Firm	
MKT 440	Global Marketing	
OPS 480	Supply Chain Management Strategies	
Total Hours		15

## Marketing

A student with a major or minor in Marketing learns systematic ways for identifying, understanding and satisfying consumer and organizational needs. Courses in the major are designed to instill in students an appreciation for both the total marketing process as well as specialized marketing activities such as:

- Purchasing
- Sales
- Retailing
- Brand management
- Marketing research

They likewise focus on how to integrate the marketing process with the objectives of the organization, the functions of the economy, and the constraints of society from national and global perspectives. Students learn to apply conceptual principles and quantitative techniques in their study of consumer and business markets with the goal of becoming informed, skilled and competent marketing professionals. Marketing majors also have the option to earn an emphasis in Sales Management or Product Innovation as part of their major. To earn either emphasis, majors must select all three of their electives from a required list of marketing courses that focus on sales or product innovation. Both emphases are very attractive to many prospective employers. The marketing program also competes annually in the National Collegiate Sales Competition. Marketing majors wishing to participate in the competition apply to be on the UD team in the fall.

Marketing majors frequently combine their academic studies with either a co-op or internship work experience. General elective credit for such experiences is approved on a case-by-case basis with the criteria being the nature of the experience and its degree of integration into the student's academic program as well as successful completion of internship/co-op preparation activities required by the department.

## Faculty

Jay Janney, Chairperson

Associate Professors: Durmusoglu, Pan, Sparks, Wells

Assistant Professors: Davidson, Dugan, Harmon-Kizer, Hirunyawipada

Lecturers: Dickey, Krystofik

Adjunct Faculty: Blanford, Clarke, Collier, Hiatt, McClain, Sinnott, Woeste

## Bachelor of Science in business administration with a major in Marketing (MKT) minimum of 124 credit hours

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
HST 103 West and the World	
REL 103 Introduction to Religious and Theological Studies	
PHL 103 Intro To Philosophy	
ENG 100 Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>	0-3
ENG 200 Writing Seminar II	
Oral Communication	3
CMM 100 Principles of Oral Communication	
Mathematics	3
Social Science	3
Arts	3
Natural Sciences <sup>4</sup>	7
Crossing Boundaries	variable credit
Faith Traditions	
Practical Ethical Action Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

### SBA Core Curriculum

ACC 207	Introduction to Financial Accounting	3
ACC 208	Introduction to Managerial Accounting	3
BAI 150	Business Educational Planning	1
BAI 103L	Business Computing Laboratory	1
BAI 151	Business Integration Experience	1
DSC 210	Statistics for Business I	3
DSC 211	Statistics for Business II	3
ECO 203	Principles of Microeconomics (Satisfies CAP Social Science)	3
ECO 204	Principles of Macroeconomics	3
ENG 370	Report & Proposal Writing (Satisfies CAP Inquiry)	3
or ENG 371	Technical Communication	
or ENG 372	Business Communication	
FIN 301	Introduction to Financial Management	3

MGT 201	Legal Environment of Business	3
MGT 301	Organizational Behavior	3
MGT 490	Managing the Enterprise (Satisfies CAP Integrative)	3
MTH 128	Finite Mathematics	3
MTH 129	Calculus for Business (Satisfies CAP Mathematics)	3
MIS 301	Information Systems in Organizations	3
MKT 301	Principles of Marketing	3
OPS 301	Survey of Operations & Supply Management	3
PHL 313	Business Ethics (Satisfies CAP Practical Ethical Action and Adv Studies in PHL/REL)	3
or REL 368	Practical wisdom in the business world	
ECO elective (300/400 level)		3
Social Science elective (ANT, POL, PSY, SOC)		3

### Major Requirements

MKT 450	Buyer Behavior & Market Analysis (This course and MKT 455 together satisfy CAP Major Capstone.)	6
MKT 455	Marketing Analytics and Strategy (This course and MKT 450 together satisfy CAP Major Capstone.)	3
Select three MKT electives or an emphasis: <sup>1</sup>		9

#### Sales Management Emphasis

MKT 310	Principles of Selling	
MKT 411	Sales Management	
MKT 412	Advanced Selling Skills in High Technology Industries <sup>2</sup>	
or MKT 413	Value Analysis in Major Sales Engagements	
or MGT 313	Negotiation	
or MIS 467	Data Warehousing	
or MIS 467	Data Warehousing	

#### Product Innovation Emphasis

MKT 435	New Product Development	
MKT 437	Advanced New Product Development	
MKT 330	Services Marketing	
or MKT 350	Digital Marketing	
or MKT 341	Business-to-Business Marketing	
or MKT 430	Brand Management	
or MKT 436	Marketing Intelligence	

<sup>1</sup> A student can select three MKT electives or an emphasis in Sales Management or Product Innovation.

<sup>2</sup> MIS 467 may be selected only by MIS and MKT double majors.

Academic Electives to bring total to at least 124 credits

## Minor in Marketing (MKT)

### Marketing

Business Majors		
MKT 301	Principles of Marketing	3
Select four MKT electives (300/400 level) <sup>1</sup>		12
Total Hours		15

**Non-Business Majors**

MKT 300	Survey of Marketing	3
Select four MKT electives (300/400 level) <sup>1</sup>		12
Total Hours		15

<sup>1</sup> In a pattern selected in consultation with an academic advisor.

- Entrepreneurship (p. 308)
- International Business Management with a Global Markets Emphasis (p. 308)
- International Business Management with a Human Resource Management Emphasis (p. 309)
- Marketing (p. 309)
- Marketing with a Sales Management Emphasis (p. 310)
- Marketing with a Product Innovation Emphasis (p. 311)

**Entrepreneurship**

First Year	Hours
BAI 150	1
BAI 151	1
BAI 103L	1
ENG 100 (CAP Humanities Commons)	3
HST 103 (CAP Humanities Commons)	3
PHL 103 (CAP Humanities Commons)	3
REL 103 (CAP Humanities Commons)	3
MTH 128	3
MTH 129 (Satisfies CAP Mathematics)	3
CMM 100 (Satisfies CAP Oral Communication)	3
CAP components (generally CAP Natural Science and CAP Arts)	10
	<b>34</b>
Second Year	Hours
CAP Second Year Writing Seminar	3
CAP Social Science	3
MGT 220 (Must be taken first semester)	2
MGT 221 (Must be taken second semester)	1
ACC 207	3
ACC 208	3
DSC 210	3
DSC 211	3
ECO 203	3
ECO 204	3
MGT 201	3
	<b>30</b>

Third Year	Hours
MGT 301	3
MKT 301	3
FIN 301	3
MIS 301	3
OPS 301	3
ENG 370, 371, or 372 (Satisfies CAP Inquiry)	3
MGT 320	3
MGT 321	3
CAP Components and/or General Electives	6
	<b>30</b>

Fourth Year	Hours
MGT 490 (Satisfies CAP Integrative)	3
PHL 313 or REL 368 (Satisfies CAP Practical Ethical Action and Adv Studies in PHL/REL)	3
MGT 430	3
ECO upper level elective	3
ENT Electives	6
CAP Components and/or General Electives	12
	<b>30</b>

Total credit hours: 124

**International Business Management with a global markets emphasis**

First Year	Hours
BAI 150	1
BAI 151	1
BAI 103L	1
ENG 100 (CAP Humanites Commons)	3
HST 103 (CAP Humanites Commons)	3
PHL 103 (CAP Humanites Commons)	3
REL 103 (CAP Humanites Commons)	3
MTH 128	3
MTH 129 (Satisfies CAP Mathematics)	3
CMM 100 (Satisfies CAP Oral Communication)	3
CAP components (Generally CAP Natural Science and CAP Arts)	10
	<b>34</b>
Second Year	Hours
CAP Second Year Writing Seminar	3

CAP Social Science	3
ACC 207	3
ACC 208	3
DSC 210	3
DSC 211	3
ECO 203	3
ECO 204	3
MGT 201	3
MGT 301	3

**30**

Third Year	Hours
INB 302	3
MKT 301	3
FIN 301	3
MIS 301	3
OPS 301	3
ENG 370, 371, or 372 (Satisfies CAP Inquiry)	3
MGT 403	3
INB Rlective	3
CAP Components and/or General Electives	6

**30**

Fourth Year	Hours
MGT 490 (Satisfies CAP Integrative)	3
PHL 313 or REL 368 (Satisfies CAP Practical Ethical Action and Adv PHL/ REL)	3
ECO 460 or 461	3
INB 450	3
INB Global Markets Electives	6
CAP Components and/or General Electives	12

**30**

Total credit hours: 124

## International Business Management with a Human Resource Management Emphasis

First Year	Hours
BAI 150	1
BAI 151	1
BAI 103L	1
ENG 100 (CAP Humanities Commons)	3
HST 103 (CAP Humanities Commons)	3
PHL 103 (CAP Humanities Commons)	3

REL 103 (CAP Humanities Commons)	3
MTH 128	3
MTH 129 (Satisfies CAP Mathematics)	3
CMM 100 (Satisfies CAP Oral Communication))	3
CAP Components (Generally CAP Natural Science and CAP Arts)	10

**34**

Second Year	Hours
CAP Second Year Writing Seminar	3
CAP Social Science	3
ACC 207	3
ACC 208	3
DSC 210	3
DSC 211	3
ECO 203	3
ECO 204	3
MGT 201	3
MGT 301	3

**30**

Third Year	Hours
INB 302	3
MKT 301	3
FIN 301	3
MIS 301	3
OPS 301	3
ENG 370, 371, or 372 (Satisfies CAP Inquiry)	3
MGT 403	3
MGT 350	3
CAP Components and/or General Electives	6

**30**

Fourth Year	Hours
MGT 490 (Satisfies CAP Integrative)	3
PHL 313 or REL 368 (Satisfies)	3
INB 450	3
ECO 460 or 461	3
MGT 423	3
MGT 402, 404, or 405	3
CAP Components and/or General Electives	12

**30**

Total credit hours: 124

## Marketing

First Year	Hours
BAI 150	1



BAI 151	1
BAI 103L	1
ENG 100 (CAP Humanities Commons)	3
HST 103 (CAP Humanities Commons)	3
PHL 103 (CAP Humanities Commons)	3
REL 103 (CAP Humanities Commons)	3
MTH 128	3
MTH 129 (Satisfies CAP Mathematics)	3
CMM 100 (Satisfies CAP Oral Communication)	3
CAP components (generally CAP Natural Science and CAP Arts)	10
	<b>34</b>
<b>Second Year</b>	<b>Hours</b>
CAP Second Year Writing Seminar	3
CAP Social Science	3
ACC 207	3
ACC 208	3
DSC 210	3
DSC 211	3
ECO 203	3
ECO 204	3
MGT 201	3
MKT 301	3
	<b>30</b>
<b>Third Year</b>	<b>Hours</b>
MGT 301	3
FIN 301	3
MIS 301	3
OPS 301	3
ENG 370, 371, or 372 (Satisfies CAP Inquiry)	3
MKT 450	6
MKT Elective	3
CAP Components and/or General Electives	6
	<b>30</b>
<b>Fourth Year</b>	<b>Hours</b>
MGT 490 (Satisfies CAP Integrative)	3
PHL 313 or REL 368 (Satisfies CAP Practical Ethical Action and Adv Studies in PHL/REL)	3
MKT 455	3
ECO upper level elective	3
MKT Electives	6

CAP Components and/or General Electives	12
	<b>30</b>

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Total credit hours: 124

## Marketing with a Sales management Emphasis

<b>First Year</b>	<b>Hours</b>
BAI 150	1
BAI 151	1
BAI 103L	1
ENG 100 (CAP Humanities Commons)	3
HST 103 (CAP Humanities Commons)	3
PHL 103 (CAP Humanities Commons)	3
REL 103 (CAP Humanities Commons)	3
MTH 128	3
MTH 129 (Satisfies CAP Mathematics)	3
CMM 100 (Satisfies CAP Oral Communication)	3
CAP components (generally CAP Natural Science and CAP Arts)	10
	<b>34</b>
<b>Second Year</b>	<b>Hours</b>
CAP Second Year Writing Seminar	3
CAP Social Science	3
ACC 207	3
ACC 208	3
DSC 210	3
DSC 211	3
ECO 203	3
ECO 204	3
MGT 201	3
MKT 301	3
	<b>30</b>
<b>Third Year</b>	<b>Hours</b>
MGT 301	3
FIN 301	3
MIS 301	3
OPS 301	3
ENG 370, 371, or 372 (Satisfies CAP Inquiry)	3
MKT 435	3
MKT 450	6
Cap Components and/or General Electives	6
	<b>30</b>

<b>Fourth Year</b>	<b>Hours</b>
MGT 490 (Satisfies CAP Integrative)	3
PHL 313 or REL 368 (Satisfies CAP Practical Ethical Action and Adv Studies in PHL/REL)	3
ECO upper level elective	3
MKT 437	3
MKT 330, 350, 341, 430, or 436	3
MKT 455	3
CAP Components and/or General Electives	12
	<b>30</b>

Total credit hours: 124

## Marketing with a Product Innovation emphasis

<b>First Year</b>	<b>Hours</b>
BAI 150	1
BAI 151	1
BAI 103L	1
ENG 100 (CAP Humanities Commons)	3
HST 103 (CAP Humanities Commons)	3
PHL 103 (CAP Humanities Commons)	3
REL 103 (CAP Humanities Commons)	3
MTH 128	3
MTH 129 (Satisfies CAP Mathematics)	3
CMM 100 (Satisfies CAP Oral Communication)	3
CAP components (generally CAP Natural Science and CAP Arts)	10
	<b>34</b>
<b>Second Year</b>	<b>Hours</b>
CAP Second Year Writing Seminar	3
CAP Social Science	3
ACC 207	3
ACC 208	3
DSC 210	3
DSC 211	3
ECO 203	3
ECO 204	3
MGT 201	3
MKT 301	3
	<b>30</b>

<b>Third Year</b>	<b>Hours</b>
MGT 301	3
FIN 301	3
MIS 301	3
OPS 301	3
ENG 370, 371, or 372 (Satisfies CAP Inquiry)	3
MKT 435	3
MKT 450	6
Cap Components and/or General Electives	6
	<b>30</b>

<b>Fourth Year</b>	<b>Hours</b>
MGT 490 (Satisfies CAP Integrative)	3
PHL 313 or REL 368 (Satisfies CAP Practical Ethical Action and Adv Studies in PHL/REL)	3
ECO upper level elective	3
MKT 437	3
MKT 330, 350, 341, 430, or 436	3
MKT 455	3
CAP Components and/or General Electives	12
	<b>30</b>

Total credit hours: 124

## Management Courses

### MGT 201. Legal Environment of Business. 3 Hours

Survey of the legal environment in which businesses operates. Includes overview of legal system and judicial processes and coverage of constitutional principles for U.S. legal system, ways to resolve legal disputes, forms of business organization, legal issues relevant to employment, legal responsibility of businesses to clients and customers, and liability issues. Prerequisite(s): Sophomore standing.

### MGT 220. Entrepreneurship Sophomore Experience I. 2 Hours

First of two-course sequence. Designed to immerse Entrepreneurship major into the dynamics of starting and running a micro-business. Focuses on identifying market need, researching financial viability of business venture to meet that need, and marshalling the resources (among them, financial, human, technical, and motivational) to launch the business. Course is coordinated through the Crotty Center for Entrepreneurial Leadership. Prerequisite(s): Entrepreneurship major; sophomore standing; overall 2.7 GPA. Corequisite(s): ACC 207; MGT 201.

### MGT 221. Entrepreneurship Sophomore Experience II. 1 Hour

Continuation of MGT 220. Focuses on growing and running the micro-business throughout the academic year with planned liquidation or shutdown by the end of the academic year. Course is coordinated through the Crotty Center for Entrepreneurial Leadership. Overall 2.7 GPA needed. Prerequisite(s): ACC 207, MGT 220; Entrepreneurship major. Corequisite(s): ACC 208.

**MGT 229. Introduction to Entrepreneurship. 3 Hours**

Overview of entrepreneurship for non-ENT students. An introductory course to help students learn about business start-ups and assess their personal interest in pursuing such activity. Students will use creative and critical thinking processes to generate and evaluate a start-up opportunity. The course topics also cover a range of new venture-related activities including business idea generation, market research and analysis, and opportunity evaluation.

**MGT 301. Organizational Behavior. 3 Hours**

Study of individual, group, and team behavior in organizations as they interact to achieve both personal and organizational goals. Topics include individual differences, interpersonal communication, leadership, decision-making, reward systems, conflict management, and work groups and teams. Prerequisite(s): Sophomore standing.

**MGT 301H. Organizational Behavior. 3 Hours**

Study of individual, group, and team behavior in organizations as they interact to achieve both personal and organizational goals. Topics include individual differences, interpersonal communication, leadership, decision-making, reward systems, conflict management, and work groups and teams. Prerequisite(s): Sophomore standing.

**MGT 302. Managerial Skills. 3 Hours**

Course focuses on knowledge, skills and abilities in oral and written communication, decision-making, and facilitation of conflict management and group/team management. Demonstrated working competencies are required to complete the course. Prerequisite(s): Sophomore standing.

**MGT 313. Negotiation. 3 Hours**

Course integrates conceptual understanding with practical application of negotiation and examines cultural and gender differences in negotiation, influence of personality traits, the negotiation process, and different ways in which to negotiate. Demonstrated knowledge, skills and abilities are part of course requirements. Prerequisite(s): MGT 301; junior standing.

**MGT 314. Survey of Human Resources. 3 Hours**

Survey course designed to familiarize students with the major functional areas in human resources including planning, recruitment and selection, training and development, compensation, benefits, safety, and employee relations. Course develops framework for understanding the roles of HR professional, issues faced by managers and supervisors, and application of sound management theory to these issues. Prerequisite(s): Junior standing.

**MGT 318. Fundamentals of New Venture Creation. 3 Hours**

Fundamentals of New Venture Creation for non-Entrepreneurship majors. Overview of the concepts and aspects involving creation of new business ventures, new product development, and innovation within existing companies now popularly called corporate venturing. Topics include entry strategies, creating high potential opportunities, entrepreneurial finance, business plan development, entrepreneurial marketing, the legal structures of new businesses, and government programs for assisting entrepreneurial firms. Does not count towards Entrepreneurship major. Prerequisite(s): Sophomore standing.

**MGT 319. Fundamentals of Entrepreneurial Finance. 3 Hours**

Fundamentals of entrepreneurial finance for non-ENT majors. Focuses on financial aspects of starting, growing, and harvesting entrepreneurial ventures. Includes assessments of various sources of capital for small and growth businesses with emphasis placed on how common financing deals are structured, common financing pitfalls, and various legal documentation used to consummate financial transactions. Does not count towards Entrepreneurship major. Prerequisite(s): Pre- or co-requisite: MGT 318; Sophomore standing.

**MGT 320. New Venture Creation. 3 Hours**

Overview of the concepts and aspects involving creation of new business ventures, new product development, and innovation within existing companies now popularly called corporate venturing. Topics include entry strategies, creating high potential opportunities, entrepreneurial finance, business plan development, entrepreneurial marketing, the legal structures of new businesses, and government programs for assisting entrepreneurial firms. Fall sections open to Entrepreneurship majors only with overall 2.7 GPA. Prerequisite(s): ACC 208; MGT 221.

**MGT 321. Financing Entrepreneurial Ventures. 3 Hours**

Focuses on financial aspects of starting, growing, and harvesting entrepreneurial ventures. Includes assessments of various sources of capital for small and growth businesses with emphasis placed on how common financing deals are structured, common financing pitfalls, and various legal documentation used to consummate financial transactions. Fall sections open to Entrepreneurship majors only with overall 2.7 GPA. Prerequisite(s): ACC 208; pre-req or co-req FIN 301. Corequisite(s): MGT 320.

**MGT 350. Managerial Skills. 3 Hours**

Course focuses on knowledge, skills and abilities in oral and written communication, decision-making, and facilitation of conflict management and group/team management. Demonstrated working competencies are required to complete the course. Prerequisite(s): Sophomore standing.

**MGT 401. Organizational Design, Culture & Change. 3 Hours**

Course focused at the organizational level of analysis that includes design of organizations, development of organizational culture, and other issues of organizational change. Topics include processes for organizational design and change, power, and information processing. Prerequisite(s): MGT 301; junior standing.

**MGT 402. Leadership & Motivation. 3 Hours**

An in-depth study of individual and group/team motivation in an organizational setting through examination of individual, organizational, and societal influences on motivation. Focus is on how leaders can understand, and then affect, motivation through a variety of mechanisms. Prerequisite(s): MGT 301; junior standing.

**MGT 403. Cross-Cultural Management. 3 Hours**

Study of general cross-cultural differences and development of cross-cultural frameworks in decision-making, negotiation, conflict management, communication, and general business relations. Primary emphasis is on understanding how and why cultures differ and how such differences can be managed. Prerequisite(s): MGT 301; junior standing.

**MGT 404. Group Dynamics, Team Processes & Decision Making. 3 Hours**

In-depth study of group formation, team design, and diagnosis with emphasis on developing and maintaining different types of groups and teams. Course focuses on leaders' knowledge, skills and abilities to work effectively with teams and groups. Prerequisite(s): MGT 301; junior standing.

**MGT 405. Employee Training & Development. 3 Hours**

Focuses on training and learning methods and models, career paths, and self-improvement methods within the balance of organizational, job, and individual needs. Additional emphasis on systematic development and evaluation of training programs and role of organizational leader in ensuring employee training and development. Prerequisite(s): MGT 301; junior standing.

**MGT 409. Current Issues in Leadership. 3 Hours**

Selected topics that consider and analyze current problems and emerging issues in leadership and in the leader's role in promoting effective organizational change and development. Prerequisite(s): MGT 301; junior standing.

**MGT 410. Senior Seminar in Experiencing Leadership. 3 Hours**

Focus on integration of knowledge, skills and abilities acquired in leadership major courses. Seminar combines classroom component with relevant and approved internship or consulting project to integrate the study of leadership with its practice. Prerequisite(s): MGT 401, MGT 402; Leadership major; senior standing.

**MGT 414. Multinational Corporate Management. 3 Hours**

Introduction to use of strategic management in international context with examination of different strategic and tactical approaches organizations use to manage international operations. Prerequisite(s): Senior standing.

**MGT 420. Entrepreneurial Marketing. 3 Hours**

Study of the techniques used to profitably identify and fill customers' needs when operating with a limited budget during the early stages of a start-up or in a small to medium sized firm. Course strives to develop skills in applying basic marketing principles and high impact sales and promotion techniques in integrated manner to produce a practical, cost-effective action plan for start-ups and smaller companies. Also listed as MKT 420. Prerequisite(s): MKT 300 or MKT 301; junior standing.

**MGT 421. Small Business Management. 3 Hours**

Course addresses unique characteristics of small businesses (e.g., resource limitations, family participation) and grapples with ways to overcome the "liability of smallness." Coverage includes effect of macro-trends (e.g., changing technology and globalization) on small business, review of topics from functionally-oriented courses, examination of how functional models such as pricing models can be modified for small business use, and ways for small business to identify and exploit weaknesses of larger, better financed competitors. Prerequisite(s): ACC 200 or 208; MGT 201; junior standing.

**MGT 422. Business Plans for Emerging Firms. 3 Hours**

This course explores multiple business models for launching a new venture. Business models are examined in terms of the type of product/service being offered as well as the goals of the entrepreneur, firm growth, and time to market. The benefits and costs of different types of business plans will be examined relative to the opportunities that students may wish to pursue. Students taking this course must have a potential business opportunity in mind. Prerequisite(s): MGT 320, MGT 321; junior standing; ENT major; permission of department chairperson.

**MGT 423. Human Resource Management in the Emerging Firm. 3 Hours**

This course explores issues unique to the human resource management (HRM) needs and challenges facing entrepreneurs and their firms. Emphasis is placed on how entrepreneurs can create effective HRM systems in the areas of staffing, recruitment and selection, compensation, motivations, and employee development. Care will be given to address the changes in HRM needs as the firm evolves through several transitional stages. Prerequisite(s): MGT 301; junior standing.

**MGT 424. Family Business Management. 3 Hours**

This course explores topics relevant to entrepreneurs within the family business environment. Specific topics examined will include how family businesses emerge and evolve as well as the unique challenges often found in family business context (e.g., dealing with family conflicts, how to motivate and evaluate employees when a mix of family and non-members are involved, and planning for succession). Prerequisite(s): MGT 320, MGT 321; junior standing.

**MGT 425. Franchising. 3 Hours**

Provides an overview of business franchising and how franchising can be used to grow a business concept. Students will learn how franchises operate and when to use franchising as a business model. Understanding the complexities of franchising (e.g. which ideas can be franchised, pricing strategies, and territory management) and the keys to success (e.g., the importance of communications, networking, teamwork, leadership) are important goals of the course. Counts as elective credit for ENT/LDR majors and minors. Prerequisite(s): Junior standing; ENT/LDR majors and minors only.

**MGT 429. Current Issues in Entrepreneurship. 3 Hours**

In-depth examination of selected contemporary topics relevant to entrepreneurship. Subject matter may vary each semester. May be taken only once for credit toward Entrepreneurship major or minor. Prerequisite(s): Junior standing.

**MGT 430. Senior Seminar in Entrepreneurship. 3 Hours**

Project-based capstone learning experience for Entrepreneurship major. Course objective is to integrate prior coursework through completion of a consulting project with local entrepreneurial firm, including business plan revision, market research, feasibility testing, financial modeling and analysis, and operations analysis. Course is coordinated through the Crotty Center for Entrepreneurial Leadership. Overall 2.7 GPA or higher needed. Prerequisite(s): MGT 301, MGT 320, MGT 321; Entrepreneurship major.

**MGT 490. Managing the Enterprise. 3 Hours**

Course focuses on creating understanding of how concepts and analytical tools learned in other business courses are integrated in practice to create a unified whole. Students learn how general and top managers gather and use information to influence organizational mission, goals, and strategies. Course typically relies heavily on cases and/or business simulation. Prerequisite(s): DSC 211; FIN 301; MGT 301; MIS 301; MKT 301; OPS 301; senior standing; Business majors only.

**MGT 491H. Honors Thesis. 3 Hours**

Selection, design, investigation, and completion of an independent and original research thesis under guidance of departmental faculty member. Prerequisite(s): University Honors Program participant; permission of department chairperson and director of Honors Program; senior standing.

**MGT 492H. Honors Thesis. 3 Hours**

Selection, design, investigation, and completion of an independent and original research thesis under guidance of departmental faculty member. Prerequisite(s): University Honors Program participant; permission of department chairperson and director of Honors Program; senior standing.

**MGT 494. Seminar in Management. 3 Hours**

Study of selected topics or issues in contemporary managerial practice, domestic or international. May be taken more than once if topics change. Title will reflect topics covered in a particular offering. Prerequisite(s): Vary by topic; junior standing.

**MGT 497. Internship for General Elective Credit. 1-3 Hours**

Supervised work experience in partnership with sponsoring employer that is directly relevant to major or minor. Must work with internship coordinator and get approval of department chairperson or designee. May be used for general elective credit only. Prerequisite(s): Entrepreneurship or Leadership major; junior standing; overall GPA of 2.7 or higher; permission of Internship Coordinator.



**MGT 498. Cooperative Education. 1-3 Hours**

Optional full-time work period off campus alternating with study period on campus. (See Chapter X; consult Cooperative Education Office for details.) Permission of chairperson or designee required. May be used for general elective credit only. LDR or ENT majors only. Prerequisite(s): Overall GPA of 2.7 or higher.

**MGT 499. Independent Study. 1-3 Hours**

Supervised study involving directed readings, individual research (library, field, or experimental), or projects in specialized area of management. May be taken only once. May count as general elective credit. Does not apply to requirements for Leadership or Entrepreneurship major or minor. Prerequisite(s): MGT 301; ENT or LDR major; senior standing; sponsorship by faculty member; permission of department chairperson.

## Marketing Courses

**MKT 300. Survey of Marketing. 3 Hours**

Survey of marketing for non-marketing majors. Course introduces students to market and environmental analysis, marketing strategy and links with corporate strategy, market segmentation, organizational and consumer markets, and marketing mix (product, price, promotion, distribution). Prerequisite(s): Non-business majors only; sophomore standing.

**MKT 301. Principles of Marketing. 3 Hours**

The general principles and practices underlying the processes of marketing. Analysis of the environmental conditions of manufacturers, wholesalers, retailers, and other marketing agencies. Prerequisite(s): Business majors only; sophomore standing.

**MKT 301H. Principles of Marketing. 3 Hours**

The general principles and practices underlying the processes of marketing. Analysis of the environmental conditions of manufacturers, wholesalers, retailers, and other marketing agencies. Prerequisite(s): Business majors only; sophomore standing.

**MKT 310. Principles of Selling. 3 Hours**

The nature of selling, explored through the practical application of buying motives and selling techniques. Projects and role-playing to experience the preparation, closing, and post-purchase phases of selling. Prerequisite(s): MKT 300 or MKT 301.

**MKT 315. Retail Marketing. 3 Hours**

Survey of the development of retailing and the impact of consumer behavior, fashion, computers, and other innovations. Structural organization, location, and layout. Merchandising operations including planning of sales, purchases, stock control, markup, and expense control. Prerequisite(s): MKT 300 or MKT 301.

**MKT 330. Services Marketing. 3 Hours**

Basic concepts of services marketing including discussion of marketing concepts and their management implications in services organizations, the scope of ethics and social responsibility at the national and global levels, and how the external environment, both domestic and international, influences organization strategy. Prerequisite(s): MKT 300 or MKT 301.

**MKT 340. Multicultural Marketing Analysis. 3 Hours**

Study of basic concepts and theories of multicultural marketing. Students acquire basic understanding of culture, awareness of cultural differences, and appreciation of importance of cultural adaptation for marketing program, especially as related to development of marketing systems. Prerequisite(s): MKT 300 or MKT 301.

**MKT 341. Business-to-Business Marketing. 3 Hours**

Concepts and analytical procedures associated with marketing to business. Business consumer and competitor analysis, marketing information systems, marketing research, and demand forecasting. Strategy development in product, promotion, distribution, and pricing with focus on manufacturers of business products. Prerequisite(s): MKT 300 or MKT 301.

**MKT 350. Digital Marketing. 3 Hours**

Comprehensive study of the internet as a marketing channel and as an economic and social phenomenon. Emphasis is on role of internet in firm's overall marketing efforts, especially marketing mix, target markets, and external environment; principles of e-commerce; and application of course knowledge in a managerial and decision-making context. Prerequisite(s): MKT 300 or MKT 301.

**MKT 350H. Digital Marketing. 3 Hours**

Comprehensive study of the internet as a marketing channel and as an economic and social phenomenon. Emphasis is on role of internet in firm's overall marketing efforts, especially marketing mix, target markets, and external environment; principles of e-commerce; and application of course knowledge in a managerial and decision-making context. Prerequisite(s): MKT 300 or MKT 301.

**MKT 405. Consumer Behavior. 3 Hours**

Comprehensive study of buyer decision making which offers insight into the buyer-seller relationship. Application of theories from psychology and social psychology to investigate the behavior of industrial and consumer buyers. Prerequisite(s): MKT 300 or MKT 301.

**MKT 406. Marketing Channels. 3 Hours**

Study of the place element of the marketing mix. A focus on the relationships among manufacturers, wholesalers, and retailers. Channel structure and design including franchising. Prerequisite(s): MKT 300 or MKT 301.

**MKT 411. Sales Management. 3 Hours**

The structure of the sales organization; determination of sales policies; selection, training, and motivation of salespersons; establishing sales territories and quotas. Prerequisite(s): (MKT 300 or MKT 301); MKT 310.

**MKT 411H. Sales Management. 3 Hours**

The structure of the sales organization; determination of sales policies; selection, training, and motivation of salespersons; establishing sales territories and quotas. Prerequisite(s): (MKT 300 or MKT 301); MKT 310.

**MKT 412. Advanced Selling Skills in High Technology Industries. 3 Hours**

This course is focused on expanding the depth and breadth of the students' knowledge of the professional selling process, so that they can develop a much deeper understanding of Business-to-Business (B2B), Consultative Selling in High Technology Industries, with a significant emphasis placed on the Complex or Major Sale. Prerequisite(s): MKT 310.

**MKT 413. Value Analysis in Major Sales Engagements. 3 Hours**

According to Neil Rackham, author of "SPIN Selling": "Today, sales forces that simply communicate value to the customer are doomed to fail. Sales must begin to create value for the customer, in order to survive." In this course you will learn how to define and begin the process of investigating and determining three types of value for the customer: Financial Value, Business Value and Personal Value. We will then learn how to further develop and quantify each type of value for the customer. Once we have created the value for the customer, we will focus on how to articulate and present this value to the customer by "selling with impact"; to close the sale, win the business and enhance the long-term Customer Partnering Relationship. Prerequisite(s): MKT 310.

**MKT 420. Entrepreneurial Marketing. 3 Hours**

Study of the techniques used to profitably identify and fill customers' needs when operating within a limited budget during the early stages of a start-up or in a small to medium sized firm. Course strives to develop skills in applying basic marketing principles and high impact sales and promotion techniques in integrated manner to produce a practical, cost-effective action plan for start-ups and smaller companies. Also listed as MGT 420. Prerequisite(s): MKT 300 or MKT 301.

**MKT 421. Advertising. 3 Hours**

Nature and scope of advertising, social and economic aspects, role of research, creative strategy, media planning and selection, coordination with other marketing efforts. Prerequisite(s): MKT 300 or MKT 301.

**MKT 428. Promotion Management. 3 Hours**

Integration course to familiarize marketing students interested in promotion and marketing communication with tools necessary for the development, implementation, and management of promotional programs. Focus on management and coordination of advertising, personal selling, publicity and public relations, sales promotion, and collateral materials. Prerequisite(s): MKT 300 or MKT 301.

**MKT 430. Brand Management. 3 Hours**

This highly interactive course is a hands-on, practical exploration of product, service, and enterprise-wide brand building and management. The course is structured along the daily responsibilities and challenges faced by brand/marketing managers. As such, the course will provide experience with proven strategies for building successful brands in the competitive marketplace, the decisions and options faced by brand managers, and the tools to effectively manage brands. It covers topics such as product management, branding, brand equity, integrated branding strategies, brand positioning, perceptual mapping and long term brand management. Prerequisite(s): MKT 300 or MKT 301.

**MKT 435. New Product Development. 3 Hours**

Investigation and analysis of the new product development process, the management of a product through its life cycle, and the importance of the price variable in the product management process. Prerequisite(s): MKT 300 or MKT 301.

**MKT 436. Marketing Intelligence. 3 Hours**

This course provides an examination of how consumer marketing is evolving in the context of consumer behavior analysis, personalized marketing channels, and computer automation tools. The focus is on analyzing personalized consumer marketing based on consumer behavior. Prerequisite(s): MKT 300 or MKT 301.

**MKT 437. Advanced New Product Development. 3 Hours**

Study of the role of new product development in driving marketing success for firms. This course is designed to help students develop an understanding and appreciation of the difficulties and challenges of designing, developing, and launching new products. Prerequisite(s): MKT 435.

**MKT 440. Global Marketing. 3 Hours**

Emphasis on understanding global marketing environments, developing skills of global market analysis, designing and developing appropriate marketing strategies for global markets, decision making in global marketing. Prerequisite(s): MKT 300 or MKT 301.

**MKT 445. Special Topics in International Marketing. 3 Hours**

Study abroad program. Subject varies from time to time. May be taken more than once if topic changes Prerequisite(s): Junior standing.

**MKT 450. Buyer Behavior & Market Analysis. 6 Hours**

Integration of theoretical components of buyer behavior and marketing research. Emphasis placed on how marketing managers use concepts from these bodies of knowledge to make better decisions. Topics include common processes and methods of contemporary market research, analysis of purchase decisions, market research techniques used to gather information about purchase decisions, and use of information to formulate and implement a marketing strategy. Prerequisite(s): DSC 211; MKT 301; Marketing major; junior standing.

**MKT 455. Marketing Planning & Strategy. 3 Hours**

Integrative course in marketing with emphasis on managerial decision making. The course is designed around a strategic marketing planning approach with a clear emphasis on how to do strategic analysis and marketing planning. Prerequisite(s): ACC 207, ACC 208; MKT 450; Marketing major.

**MKT 491H. Honors Thesis. 3 Hours**

Selection, design, investigation, and completion of an independent original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of the director of the program and the departmental chairperson.

**MKT 492H. Honors Thesis. 3 Hours**

Selection, design, investigation, and completion of an independent original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of the director of the program and the departmental chairperson.

**MKT 494. Special Topics in Marketing. 3 Hours**

Subject varies from time to time. May be taken more than once if topic changes. Prerequisite(s): Vary by topic.

**MKT 497. Internship for General Elective Credit. 1-3 Hours**

Practical work experience associated with career development and career exploration. See internship coordinator for details. Permission of department chair or designee required. Prerequisite(s): MKT major; junior standing; overall gpa of 2.7 or higher; permission of internship coordinator.

**MKT 498. Cooperative Education. 1-3 Hours**

Optional full-time work period off campus alternating with study period on campus. (See Chapter X; consult Cooperative Education Office for details.) Permission of chairperson or designee required. For general elective credit only. Prerequisite(s): MKT major; overall gpa of 2.7 or higher.

**MKT 499. Independent Study in Marketing. 1-3 Hours**

Study of one or more specific aspects of the marketing process with emphasis on individual reading and research. Subject matter to be determined by the instructor on the basis of interest and need of the student. Enrollment limited. Permission of chairperson or designee required. Prerequisite(s): MKT 301; MKT major; senior standing; permission of department chairperson.

# Management Information Systems, Operations Management and Decision Sciences

Majors:

- Bachelor of Science in Business Administration, Management Information Systems (p. 316)
- Bachelor of Science in Business Administration, Operations and Supply Management (p. 318)

Minors:

- Business Analytics (p. 320)
- Business Intelligence (p. 317)
- Cyber-Security (p. 317)
- Management Information Systems (p. 318)
- Operations and Supply Management (p. 319)

The Department of Management Information Systems, Operations Management and Decision Sciences offers courses in several quantitative and systems areas, a major and a minor in management information systems, a major and minor in operations and supply management, and minors in business analytics, business intelligence and cyber-security.

Faculty

Jayesh Prasad, Chairperson  
Professor Emeritus and Distinguished Service Professor: Bohlen  
Professors Emeriti: Amsden, Casey, Hoffer, Vlahos  
Sherman-Standard Register Professor of MIS: Ferratt  
Niehaus Chair in Operations Management: Kanet  
Professors: Bobrowski, Dunne, Enns, Ferratt, Gorman, Kanet, Prasad, Wells  
Associate Professors: Salisbury, Wynn  
Assistant Professors: Chen, Jacobs  
Lecturers: Edelmann, Hall, Wagner

## Management Information Systems

The MIS major at the University of Dayton is designed primarily to develop business systems analysts. These professionals analyze and design information systems in business organizations and marshal resources (i.e. manage projects) to bring the systems development effort to successful completion. MIS professionals also facilitate the successful operation and maintenance of organizational information systems.

The major is comprised of eighteen hours of required courses which make up the MIS core and six hours of elective courses taken for breadth. Optionally, this breadth requirement can be satisfied by completing a related minor - currently Business Intelligence or Cyber Security - or by completing a double major in another business discipline. Related minors will change from time to time, reflecting the dynamic nature of the MIS discipline. Students should meet with their advisor to decide whether to opt for elective courses, a related minor, or a double-major consistent with their interests and career goals.

Faculty

Jayesh Prasad, Chairperson

Professor Emeritus and Distinguished Service Professor: Bohlen  
Professors Emeriti: Amsden, Casey, Hoffer, Vlahos  
Sherman-Standard Register Endowed Chair in MIS: Ferratt  
Niehaus Chair in Operations Management: Kanet  
Professors: Bobrowski, Dunne, Enns, Ferratt, Gorman, Kanet, Prasad, Wells  
Associate Professors: Salisbury, Wynn  
Assistant Professors: Chen, Jacobs  
Lecturers: Edelmann, Hall, Wagner

## Bachelor of Science in business administration with a major in Management Information Systems (MIS) minimum of 124 credit hours

Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup> 12

HST 103 West and the World

REL 103 Introduction to Religious and Theological Studies

PHL 103 Intro To Philosophy

ENG 100 Writing Seminar I <sup>2</sup>

Second-Year Writing Seminar <sup>3</sup> 0-3

ENG 200 Writing Seminar II

Oral Communication 3

CMM 100 Principles of Oral Communication

Mathematics 3

Social Science 3

Arts 3

Natural Sciences <sup>4</sup> 7

Crossing Boundaries variable credit

Faith Traditions

Practical Ethical Action

Inquiry

Integrative

Advanced Study variable credit

Philosophy and/or Religious Studies

Historical Studies

Diversity and Social Justice 3

Major Capstone 0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.  
<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.  
<sup>3</sup> Completed with ENG 200H or ASI 120.  
<sup>4</sup> Must include two different disciplines and accompanying lab.

SBA Core Curriculum

ACC 207 Introduction to Financial Accounting 3

ACC 208 Introduction to Managerial Accounting 3

BAI 150 Business Educational Planning 1

BAI 103L Business Computing Laboratory 1

BAI 151	Business Integration Experience	1
DSC 210	Statistics for Business I	3
DSC 211	Statistics for Business II	3
ECO 203	Principles of Microeconomics (Satisfies CAP Social Science)	3
ECO 204	Principles of Macroeconomics	3
ENG 370	Report & Proposal Writing (Satisfies CAP Inquiry)	3
or ENG 371	Technical Communication	
or ENG 372	Business Communication	
FIN 301	Introduction to Financial Management	3
MGT 201	Legal Environment of Business	3
MGT 301	Organizational Behavior	3
MGT 490	Managing the Enterprise (Satisfies CAP Integrative)	3
MTH 128	Finite Mathematics	3
MTH 129	Calculus for Business (Satisfies CAP Mathematics)	3
MIS 301	Information Systems in Organizations	3
MKT 301	Principles of Marketing	3
OPS 301	Survey of Operations & Supply Management	3
PHL 313	Business Ethics (Satisfies CAP Practical Ethical Action and Adv Studies in PHL/REL)	3
or REL 368	Practical wisdom in the business world	
ECO elective (300/400 level)		3
Social Science elective (ANT, POL, PSY, SOC)		3

### Major Requirements

MIS 150	Professional Development Experiences in Information Systems	0
MIS 305	Introduction to Business Applications: Problem Solving with Visual Tools	1
MIS 325	Programming for Business Systems	4
MIS 380	Systems Analysis & Re-Engineering	3
MIS 381	Principles of Project Management	1
MIS 385	Systems Implementation with Database Management Systems	3
MIS 465	MIS Project I-Analysis & Design in Teams (This course and MIS 475 together satisfy CAP Major Capstone.)	3
MIS 475	MIS Project II-Design & Implementation in Teams (This course and MIS 465 together satisfy CAP Major Capstone.)	3
Breadth courses through electives, related minors, or double majors.		6
Total Hours		24

### Electives Option

Select two courses from:		6
MIS 366	Business Intelligence	
MIS 368	Principles of Information Security Management	
MIS 430	Telecommunications & Networking-Classified	
MIS 460	Advanced Web Development	
MIS 467	Data Warehousing	
MIS 468	Internet Security-Classified	

MIS 499	Independent Study in Management Information Systems	
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### Related Minor Option

Complete requirements for one of these two minors: (1) Business Intelligence or (2) Cyber Security

### Double Major Option

Complete the requirements for any other SBA major.

**Academic Electives to bring total to at least 124 credits**

## Minor in Business Intelligence (bin)

### Minor in Business Intelligence

Business Majors		
MIS 305	Introduction to Business Applications: Problem Solving with Visual Tools	1
MIS 366	Business Intelligence	3
MIS 385	Systems Implementation with Database Management Systems	3
MIS 467	Data Warehousing	3
MIS elective <sup>1</sup>		3
Total Hours		13

<sup>1</sup> Choose from DSC 375, ECO 410, ECO 441, MIS 368, MIS 460, MKT 436 or as approved by the coordinator. MIS majors must select six semester hours from this list instead of three.

### Non-Business Majors

MIS 300	Survey of Management Information Systems	3
or MIS 301	Information Systems in Organizations	
MIS 305	Introduction to Business Applications: Problem Solving with Visual Tools	1
MIS 366	Business Intelligence	3
MIS 385	Systems Implementation with Database Management Systems	3
MIS 467	Data Warehousing	3
MIS elective <sup>1</sup>		3
Total Hours		16

<sup>1</sup> Choose from DSC 375, ECO 410, ECO 441, MIS 368, MIS 360, MKT 436 or as approved by the coordinator.

## minor in cyber-security (CSM)

### Minor in Cyber-Security

Business Majors		
MIS 305	Introduction to Business Applications: Problem Solving with Visual Tools	1
MIS 368	Principles of Information Security Management	3
MIS 430	Telecommunications & Networking-Classified	3
MIS 468	Internet Security-Classified	3
300/400 MIS elective <sup>1</sup>		3
Total Hours		13

### Non-Business Majors

MIS 300	Survey of Management Information Systems	3
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or MIS 301	Information Systems in Organizations	
MIS 305	Introduction to Business Applications: Problem Solving with Visual Tools	1
MIS 368	Principles of Information Security Management	3
MIS 430	Telecommunications & Networking-Classified	3
MIS 468	Internet Security-Classified	3
300/400 MIS elective <sup>1</sup>		3
Total Hours		16

<sup>1</sup> Any 300/400 MIS course except MIS 491H, MIS 492H, MIS 497, MIS 498, MIS 499 or as approved by the coordinator.

## Minor in Management Information Systems (MIS)

### Minor in Management Information Systems

Business Majors		
MIS 305	Introduction to Business Applications: Problem Solving with Visual Tools	1
MIS 380	Systems Analysis & Re-Engineering	3
MIS 381	Principles of Project Management	1
MIS 385	Systems Implementation with Database Management Systems	3
Two 300/400 level courses <sup>1</sup>		6
Total Hours		14

<sup>1</sup> Select six additional semester hours: at least three hours must be a 300 or 400 level MIS course (excluding MIS 491H, MIS 492H, MIS 497, MIS 498, and MIS 499); three additional hours may be either from the list of approved relevant major courses or another 300 or 400 level MIS course (excluding those listed above). A relevant major course is one that features concepts intended to bridge between the MIS minor and the student's major. For the list of approved relevant major courses see the MIS minor coordinator. Other courses may be taken with approval of the MIS minor coordinator, in consultation with the student's major advisor(s). Currently approved relevant major courses are: ACC 401, DSC 375, ECO 410, ECO 441, MKT 436, and OPS 350.

### Non-Business Majors

MIS 300	Survey of Management Information Systems	3
or MIS 301	Information Systems in Organizations	
MIS 305	Introduction to Business Applications: Problem Solving with Visual Tools	1
MIS 380	Systems Analysis & Re-Engineering	3
MIS 381	Principles of Project Management	1
MIS 385	Systems Implementation with Database Management Systems	3
Two 300/400 level courses <sup>1</sup>		6
Total Hours		17

<sup>1</sup> Select six additional semester hours: at least three hours must be a 300 or 400 level MIS course (excluding MIS 491H, MIS 492H, MIS 497, MIS 498, and MIS 499); three additional hours may be either from the list of approved relevant major courses or another 300 or 400 level MIS course (excluding those listed above). A relevant major course is one that features concepts intended to bridge between the MIS minor and the student's major. For the list of approved relevant major courses see the MIS minor coordinator. Other courses may be taken with approval of the MIS minor coordinator, in consultation with the student's major advisor(s). Currently approved relevant major courses are: ACC 401, DSC 375, ECO 410, ECO 441, MKT 436, and OPS 350.

## Operations and Supply Management

The operations and supply management program offered by the Department of Management Information Systems, Operations Management and Decision Sciences includes a major and a minor in operations and supply management (OPS).

Students who major or minor in operations and supply management learn how to manage the core operations of an organization. These core operations use the human, technical and financial resources of the organization to create goods and services for customers. Operations managers apply technical and quantitative tools and techniques, together with behavioral skills, to manage the transformation of inputs into outputs desired by customers. Operations managers participate in these transformation processes in many different roles, including:

- Process improvement analyst
- Quality assurance analyst
- Purchasing agent
- Production/inventory manager
- Warehouse manager
- Service facility manager
- Operations consultant

The OPS program is selective. UD students wishing to declare an OPS major must have an overall GPA of 2.8 or higher. Moreover, to declare and/or remain in the program students must earn a grade of B- or higher in the introductory course, . Exceptions to these requirements must be approved by the MIS/OM/DSC Department Chair.

In addition to other requirements, the major in Operations and Supply Management requires OPS 350, Business Process Management, DSC 375, Management Science, OPS 401, Operations Planning and Control, OPS 480, Supply Chain Management Strategies, OPS 485, Capstone OPS Project I, OPS 495, Capstone OPS Project II, and six semester hours of OPS electives.

A minor in operations and supply management is available to students who want to acquire basic skills in this area and understand that doing so will enhance their ability to manage operations in any functional area of a business. A minor in operations and supply management consists of twelve hours for students in the School of Business Administration and 21 hours for non-business students.

### Faculty

Jayesh Prasad, Chairperson

Professor Emeritus and Distinguished Service Professor: Bohlen

Professors Emeriti: Amsden, Casey, Hoffer, Vlahos

Sherman-Standard Register Professor of MIS: Ferratt  
 Niehaus Chair in Operations Management: Kanet  
 Professors: Bobrowski, Dunne, Enns, Ferratt, Gorman, Kanet, Prasad, Wells

Associate Professors: Salisbury, Wynn

Assistant Professors: Chen, Jacobs

Lecturers: Edelmann, Hall, Wagner

## Bachelor of Science in business administration with a major in Operations and Supply Management (OPS) minimum of 124 credit hours

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
HST 103 West and the World	
REL 103 Introduction to Religious and Theological Studies	
PHL 103 Intro To Philosophy	
ENG 100 Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>	0-3
ENG 200 Writing Seminar II	
Oral Communication	3
CMM 100 Principles of Oral Communication	
Mathematics	3
Social Science	3
Arts	3
Natural Sciences <sup>4</sup>	7
Crossing Boundaries	variable credit
Faith Traditions	
Practical Ethical Action	
Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

### SBA Core Curriculum

ACC 207	Introduction to Financial Accounting	3
ACC 208	Introduction to Managerial Accounting	3
BAI 150	Business Educational Planning	1
BAI 103L	Business Computing Laboratory	1
BAI 151	Business Integration Experience	1
DSC 210	Statistics for Business I	3

DSC 211	Statistics for Business II	3
ECO 203	Principles of Microeconomics (Satisfies CAP Social Science)	3
ECO 204	Principles of Macroeconomics	3
ENG 370	Report & Proposal Writing (Satisfies CAP Inquiry)	3
or ENG 371	Technical Communication	
or ENG 372	Business Communication	
FIN 301	Introduction to Financial Management	3
MGT 201	Legal Environment of Business	3
MGT 301	Organizational Behavior	3
MGT 490	Managing the Enterprise (Satisfies CAP Integrative)	3
MTH 128	Finite Mathematics	3
MTH 129	Calculus for Business (Satisfies CAP Mathematics)	3
MIS 301	Information Systems in Organizations	3
MKT 301	Principles of Marketing	3
OPS 301	Survey of Operations & Supply Management	3
PHL 313	Business Ethics (Satisfies CAP Practical Ethical Action and Adv Studies in PHL/REL)	3
or REL 368	Practical wisdom in the business world	
ECO elective (300/400 level)		3
Social Science elective (ANT, POL, PSY, SOC)		3
<b>Major Requirements</b>		<b>24</b>
DSC 375	Management Science	3
OPS 350	Business Process Management	3
OPS 401	Operations Planning & Control	3
OPS 480	Supply Chain Management Strategies	3
OPS 485	Capstone Operations & Supply Management Project I (This course and OPS 495 together satisfy CAP Major Capstone.)	1
OPS 495	Capstone Operations & Supply Management Project II (This course and OPS 485 together satisfy CAP Major Capstone.)	5
OPS electives		6

### Academic Electives to bring total to at least 124 credits

## Minor in Operations and Supply Management (OPS)

### Operations and Supply Management

Business Majors		
DSC 375	Management Science	3
OPS 350	Business Process Management	3
OPS 401	Operations Planning & Control	3
or OPS 480	Supply Chain Management Strategies	
Select three semester hours from DSC, OPS, MIS, or IET <sup>1</sup>		3
Total Hours		12

<sup>1</sup> Approved by the department chairperson.

### Non-Business Majors

DSC 210	Statistics for Business I	3
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DSC 211	Statistics for Business II	3
DSC 375	Management Science	3
OPS 300	Introduction to Operations & Supply Management	3
or OPS 301	Survey of Operations & Supply Management	
OPS 350	Business Process Management	3
OPS 401	Operations Planning & Control	3
or OPS 480	Supply Chain Management Strategies	
Select three semester hours from DSC, OPS, MIS, or IET <sup>1</sup>		3
Total Hours		21

<sup>1</sup> Approved by department chairperson.

## Decision Sciences

The Department of Management Information Systems, Operations Management and Decision Sciences offers courses in several quantitative and systems areas, a major and a minor in management information systems (see MIS), a major and minor in operations and supply management (see OPS), and minors in business analytics, business intelligence and cyber-security.

Decision sciences is the study of analysis, quantitative methodologies, and their application to the functional and behavioral problems of any organization. The major areas of study include applied statistics, operations research, and production and operations management. All business students take three decision sciences and operations management courses as part of their core business coursework:

The minor in business analytics (BAN) offers business majors and other students an opportunity to develop their skills in the quantitative methods which support managerial decision making. A minor in business analytics consists of 21 semester hours for non-business majors and 12 hours for business majors.

Specific courses in other areas (e.g. mathematics) may be used. See chairperson for approval.

### Faculty

Jayesh Prasad, Chairperson

Professor Emeritus and Distinguished Service Professor: Bohlen

Professors Emeriti: Amsden, Casey, Hoffer, Vlahos

Sherman-Standard Register Professor of MIS: Ferratt

Niehaus Chair in Operations Management: Kanet

Professors: Bobrowski, Dunne, Enns, Ferratt, Gorman, Kanet, Prasad, Wells

Associate Professors: Salisbury, Wynn

Assistant Professors: Chen, Jacobs

Lecturers: Edelman, Hall, Wagner

## Minor in Business Analytics (BAN)

A minor in Business Analytics consists of 12 hours for students in the School of Business Administration and 21 for non-business students.

### Business Analytics

Business Majors		
DSC 375	Management Science	3
OPS 350	Business Process Management	3

Select six semester hours from DSC, MIS, or OPS (300/400 level) <sup>1,2</sup>	6
Total Hours	12

<sup>1</sup> In addition to courses used to satisfy the requirements of any other major or minor. Approval of the department chairperson.

<sup>2</sup> OPS majors must select nine additional semester hours instead of six.

### Non-Business majors

DSC 210	Statistics for Business I	3
DSC 211	Statistics for Business II	3
DSC 375	Management Science	3
MIS 300	Survey of Management Information Systems	3
or MIS 301	Information Systems in Organizations	
OPS 300	Introduction to Operations & Supply Management	3
or OPS 301	Survey of Operations & Supply Management	
OPS 350	Business Process Management	3
Select three semester hours from DSC, OPS or MIS (300/400 level)		3
Total Hours		21

## Management Information Systems

First Year	Hours
MIS 150	0
BAI 150	1
BAI 151	1
BAI 103L	1
MTH 128	3
MTH 129 (Satisfies CAP Mathematics)	3
ENG 100 (CAP Humanities Commons)	3
HST 103 (CAP Humanities Commons)	3
PHL 103 (CAP Humanities Commons)	3
REL 103 (CAP Humanities Commons)	3
CMM 100 (Satisfies Cap Oral Communication)	3
CAP Components (generally CAP Arts and CAP Natural Sciences)	7
	31
Second Year	Hours
ACC 207	3
ACC 208	3
DSC 210	3
DSC 211	3
ECO 203	3
ECO 204	3
MIS 305	1
MIS 301	3

CAP Second Year Writing Seminar	3
CAP Social Science	3
CAP Components	3

**31**

<b>Third Year</b>	<b>Hours</b>
FIN 301	3
MGT 201	3
MIS 325	4
MIS 380	3
MIS 381	1
MIS 385	3
OPS 301	3
MKT 301	3
MGT 301	3
ENG 370, 371, or 372 (Satisfies CAP Inquiry)	3
CAP Components and/or General Electives	3

**32**

<b>Fourth Year</b>	<b>Hours</b>
MGT 490 (Satisfies CAP Integrative)	3
MIS 465	3
MIS 475 (Satisfies CAP Major Capstone)	3
ECO Upper Elective	3
PHL 313 or REL 369 (Satisfies CAP Practical Ethical Action and Adv Studies in PHL/REL)	3
MIS Electives	6
CAP Components and/or General Electives	9

**30**

Total credit hours: 124

## Operations management

<b>First Year</b>	<b>Hours</b>
BAI 150	1
BAI 151	1
BAI 103L	1
MTH 128	3
MTH 129 (Satisfies CAP Mathematics)	3
ENG 100 (CAP Humanities Commons)	3
REL 103 (CAP Humanities Common)	3
HST 103 (Cap Humanities Common)	3
PHL 103 (CAP Humanities Common)	3

CMM 100 (Satisfies CAP Oral Communication)	3
CAP Components	10

**34**

<b>Second Year</b>	<b>Hours</b>
ACC 207	3
ACC 208	3
DSC 210	3
DSC 211	3
ECO 203	3
ECO 204	3
OPS 301	3
CAP Second Year Writing Seminar	3
CAP Social Science	3
CAP Components	3

**30**

<b>Third Year</b>	<b>Hours</b>
FIN 301	3
MGT 301	3
MIS 301	3
MKT 301	3
MGT 201	3
DSC 375	3
ENG 370, 371, or 372 (Satisfies CAP Inquiry)	3
OPS Elective	3
OPS 350	3
CAP Components and/or General Electives	3

**30**

<b>Fourth Year</b>	<b>Hours</b>
MGT 490 (Satisfies CAP Integrative)	3
PHL 313 or REL 369 (Satisfies CAP Practical Ethical Action and Adv Studies in PHL/REL)	3
OPS 401	3
OPS 480	3
OPS 485	1
OPS 495 (Satisfies CAP Major Capstone)	5
ECO Upper Level Elective	3
OPS Elective	3
CAP Components and/or General Electives	6

**30**

Total credit hours: 124



## Decision Sciences Courses

### **DSC 210. Statistics for Business I. 3 Hours**

Basic concepts of statistics including descriptive statistics, probability, probability distributions, and estimation. Prerequisite(s): MTH 128, MTH 129; BAI 103L (may be taken as a corequisite).

### **DSC 211. Statistics for Business II. 3 Hours**

Tests of hypotheses, analysis of variance, Chi-square tests, simple and multiple regression and correlation. Use of computer software for statistical data analysis. Prerequisite(s): BAI 103L; DSC 210; MTH 129.

### **DSC 211H. Statistics for Business II. 3 Hours**

Tests of hypotheses, analysis of variance, Chi-square tests, simple and multiple regression and correlation. Use of computer software for statistical data analysis. Prerequisite(s): BAI 103L; DSC 210; MTH 129.

### **DSC 313. Advanced Business Statistics. 3 Hours**

Selected topics from advanced statistics with emphasis on business applications. Prerequisite(s): DSC 211 or equivalent.

### **DSC 375. Management Science. 3 Hours**

Quantitative modeling applications for managerial analysis and decision making. Develops skills to analyze and solve problems using computer-based mathematical modeling in a wide variety of business decision situations involving business functional areas such as accounting, economics, finance, human resources, marketing, management information systems, and operations management. Topics include constrained modeling techniques, simulation, and multi-criteria decision making. Prerequisite(s): DSC 211; OPS 301 (may be taken as a corequisite).

### **DSC 410. Decision Theory. 3 Hours**

Introduction to the analysis of decisions under uncertainty. Topics include structuring of the decision process, Bayesian decision theory, and multicriteria decision making. Prerequisite(s): DSC 211 or equivalent.

### **DSC 415. Simulation Modeling & Analysis. 3 Hours**

Introduction to simulation models in support of business decision making. Emphasis on building and analyzing models in a variety of applications, including manufacturing and service systems. Study and use of a simulation language. Prerequisite(s): DSC 211; DSC 375 recommended.

### **DSC 435. Analysis of Factory Systems. 3 Hours**

Concepts and techniques for the analysis, design, and management of factory production systems. Work-flow layout, scheduling techniques, stochastic process models, simulations, and computerized factory models. Prerequisite(s): DSC 375, OPS 301.

### **DSC 491H. Honors Thesis. 3 Hours**

Selection, design, investigation, and completion of an independent original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of the director of the program and the departmental chairperson.

### **DSC 492H. Honors Thesis. 3 Hours**

Selection, design, investigation, and completion of an independent original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of the director of the program and the departmental chairperson.

### **DSC 494. Seminar in Decision Sciences. 3 Hours**

Study of selected topics or issues in applied statistics, quantitative business analysis, and production and operations management. Topics vary from time to time. May be taken more than once if topics change. Title will reflect topics covered in a particular offering.

### **DSC 497. Laboratory Work Experience. 1-6 Hours**

Under faculty sponsorship and in association with a participating industrial, commercial, educational, health-care, or governmental organization, practical experience in work associated with the student's minor concentration. (See internship coordinator for details.) Does not satisfy MIS elective. Permission of chairperson required. Prerequisite(s): Permission of department chairperson.

### **DSC 498. Cooperative Education. 3 Hours**

Optional full-time work period off campus alternating with study period on campus. Prerequisite(s): Permission of department chairperson.

### **DSC 499. Independent Study in Decision Sciences. 1-6 Hours**

Research in conjunction with a faculty member on a subject within the general area of decision sciences. Normally open only to juniors and seniors who have attained a cumulative grade-point average of 3.0 or above. Permission of chairperson required. Prerequisite(s): Permission of department chairperson.

## Management Info Systems Courses

### **MIS 150. Professional Development Experiences in Information Systems. 0 Hours**

Participation in experiences to promote development of practical knowledge, career networks, and professional skills relevant to the field of information systems.

### **MIS 220. Exploring Careers in Information Systems. 1 Hour**

Designed to immerse students into the contemporary issues of management information systems. Site visits and guest lectures from management information systems leaders. Priority given to first and second year students. Satisfactory/No Credit. Prerequisite(s): Permission of department chairperson.

### **MIS 300. Survey of Management Information Systems. 3 Hours**

Introduction to management information systems concepts, terminology, purposes, and applications for the nonbusiness student. Not open to students in the School of Business Administration or to those with credit in MIS 301. Permission of department chairperson required. Prerequisite(s): (BAI 103L or HSS 226); junior standing.

### **MIS 301. Information Systems in Organizations. 3 Hours**

Survey of theory and applications of computer-based information systems in organizations. The role of information in organizational processes, current information technology, decision support systems, and end-user computing and distributed processing systems. Sophomores are encouraged to take this course during their second term. Prerequisite(s): ACC 207;(ACC 208 or ACC 301, (may be taken as a corequisite)); (BAI 103L or HSS 226); ECO 203.

### **MIS 301H. Information Systems in Organizations. 3 Hours**

Survey of theory and applications of computer-based information systems in organizations. The role of information in organizational processes, current information technology, decision support systems, and end-user computing and distributed processing systems. Sophomores are encouraged to take this course during their second term. Prerequisite(s): ACC 207;(ACC 208 or ACC 301, (may be taken as a corequisite)); (BAI 103L or HSS 226); ECO 203.

**MIS 302. Systems Thinking. 3 Hours**

This course focuses on developing an understanding of systems thinking, decision making, and information systems in organizations. Learning about general systems concepts, system diagramming tools, and different approaches to systems thinking will facilitate examining and interpreting organizations and the information systems used to support decision making and improve the efficiency, effectiveness, and adaptability of organizations. The course will examine the role of information in organizational processes and will include analyzing the suitability of current information systems and technologies for these proc.

**MIS 305. Introduction to Business Applications: Problem Solving with Visual Tools. 1 Hour**

Introduction to basic programming structures, graphical user interface design, and other tools using a visual programming language such as Visual Basic.net. Prerequisite(s): BAI 103L or equivalent.

**MIS 325. Programming for Business Systems. 4 Hours**

Process of software development for business system implementation. Fundamental object-oriented programming concepts include program design, documentation, development, and testing of computer solutions for business problems using a modern programming language, such as Java. Prerequisite(s): MIS 305.

**MIS 360. E-Commerce Processes & Technology. 3 Hours**

Introduction to information systems technologies and techniques that enable business-to-business and business-to-consumer electronic relationships. Development of interactive websites with an introduction to client- and server-side scripting and simple database access. Prerequisite(s): (MIS 300 or MIS 301); (MIS 305 or equivalent); (BAI 103L or equivalent HTML knowledge).

**MIS 366. Business Intelligence. 3 Hours**

The use of computer-based data analysis tools to support managers in problem solving and decision making. Prerequisite(s): DSC 211; MIS 301. Corequisite(s): MIS 385.

**MIS 368. Principles of Information Security Management. 3 Hours**

Addresses issues relevant to creating a systematic information assurance, compliance control structure and systematic security procedures. Information security policy, assets, physical and logical information resource security, business continuity, and compliance with relevant security standards are covered. Prerequisite(s): MIS 301.

**MIS 380. Systems Analysis & Re-Engineering. 3 Hours**

Concepts, methods, techniques, and tools needed to initiate a systems development project and to conduct the requirements collection, analysis, and structuring activities of systems development. Structured life cycle and alternatives. Re-engineering business processes through information systems. Prerequisite(s): MIS 300 or MIS 301; MIS 385 (may be taken as a corequisite); Business majors only or permission of department chairperson. Corequisite(s): MIS 381.

**MIS 381. Principles of Project Management. 1 Hour**

Introduction to project management concepts and ideas. Possible use of an existing team project from another course to learn principles of scheduling, team management, client management, etc., emphasizing best project management practices. Prerequisite(s): MIS 300 or MIS 301.

**MIS 385. Systems Implementation with Database Management Systems. 3 Hours**

Concepts, techniques, and tools to convert a logical system design into a working application using a relational DBMS. File and data structures, logical and physical database design, security and data integrity, file design and processing. DBMS functions, SQL, 3GL and 4GL access to databases, linkage to WWW pages, database architectures, CASE. Prerequisite(s): MIS 300 or MIS 301; MIS 305 (may be taken as a corequisite).

**MIS 410. Object-Oriented Analysis & Design. 3 Hours**

Introduction to object-oriented concepts and techniques for analyzing and designing systems. Systems development project using an object-oriented CASE tool. Prerequisite(s): MIS 301 or permission of instructor; MIS 305 recommended.

**MIS 420. Expert & Knowledge-Based Systems. 3 Hours**

Introduction to artificial intelligence and expert and knowledge-based systems; knowledge acquisition, implementation, and validation; advanced topics; applications to business. Use of expert system software. Prerequisite(s): BAI 103L or equivalent; DSC 375 recommended.

**MIS 425. Information for Total Quality. 3 Hours**

Theory and practice of total quality management (TQM); applications of TQM in the information systems function, information system requirements for TQM programs. Prerequisite(s): MIS 301; OPS 301.

**MIS 430. Telecommunications & Networking-Classified. 3 Hours**

Introduction to computer-based communication networks, underlying concepts; basic hardware components and operating systems; network architectures and protocols; data integrity and security; message routing; network management. Offered on the Riverside Campus. Prerequisite(s): MIS 368 or permission of instructor. US Department of Defense Interim Secret Clearance or higher.

**MIS 460. Advanced Web Development. 3 Hours**

Study of web development concepts and techniques. Design and development of dynamic web-sites using technologies such as ASP.NET. Prerequisite(s): MIS 300 or MIS 301; MIS 305 or equivalent.

**MIS 461. E-Business. 3 Hours**

Models of how to conduct business electronically. Topics include different forms of e-business, products and services provided on the Internet, how to combine electronic business with brick-and-mortar business, and keys to success for electronically enhanced businesses. Prerequisite(s): MIS 301.

**MIS 465. MIS Project I-Analysis & Design in Teams. 3 Hours**

First of a two-course sequence. Team participation/management and project management skills. Apply these skills in teams to perform an analysis and preliminary re-design of an existing organization's information system. Emphasis on written and oral communications, including team-prepared reports and presentations. Offered fall semester only. Prerequisite(s): MIS 325, MIS 380, MIS 381, MIS 385.

**MIS 467. Data Warehousing. 3 Hours**

Purpose, design, implementation, and effective use of data warehouses and data warehousing technologies. Topics include data warehouse design, data marts, data quality management, extract-transform-load process, and business intelligence. Prerequisite(s): MIS 301, MIS 385.

**MIS 468. Internet Security-Classified. 3 Hours**

This course provides students with an understanding of both defensive and offensive issues of information security. The course includes instruction on information security theory, psychological operations, hacking, viruses, and systems management. The course emphasizes security for e-commerce on the Internet. Offered on the Riverside Campus. Prerequisite(s): MIS 430; US Department of Defense Interim Secret Clearance or higher.

**MIS 475. MIS Project II-Design & Implementation in Teams. 3 Hours**

Continuation of MIS 465. With its organizational client, each team carries its project as far as possible towards final design and actual implementation. Emphasis on written and oral communications, including team-prepared reports and presentations. Offered winter semester only. Prerequisite(s): MIS 465.

**MIS 491H. Honors Thesis. 3 Hours**

Selection, design, investigation, and completion of an independent original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of the director of the program and the departmental chairperson.

**MIS 492H. Honors Thesis. 3 Hours**

Selection, design, investigation, and completion of an independent original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of the director of the program and the departmental chairperson.

**MIS 494. Seminar in Management Information Systems. 1-4 Hours**

Study of selected technical and/or organizational issues in information systems. Topics vary from time to time. May be taken more than once if topics change. Title will reflect topics covered in a particular offering.

**MIS 497. Laboratory Work Experience. 1-6 Hours**

Under faculty sponsorship and in association with a participating industrial, commercial, educational, health-care, or governmental organization; practical experience in work associated with the student's major concentration. (See internship coordinator for details.) Prerequisite(s): Permission of department chairperson.

**MIS 498. Cooperative Education. 1-6 Hours**

Optional full-time work period off campus alternating with study period on campus. (See Chapter X; consult Cooperative Education Office for details.) Prerequisite(s): Permission of department chairperson.

**MIS 499. Independent Study in Management Information Systems. 1-6 Hours**

Research in conjunction with a faculty member on a subject within the general area of management information systems. Open only to juniors or seniors who have attained a cumulative grade point average of 3.0 or above. Prerequisite(s): Permission of department chairperson.

## Operations Management Courses

**OPS 220. Experiences in Operations & Supply Management. 1 Hour**

Designed to immerse students into the contemporary issues of operations and supply management. Site visits and guest lectures from operations management leaders. Priority given to first and second year students. Satisfactory/No Credit. Prerequisite(s): Permission of department chairperson.

**OPS 300. Introduction to Operations & Supply Management. 3 Hours**

Concepts and OPS software-based techniques of designing, implementing, managing, and improving operations in manufacturing and service organizations, including project management, services systems design, resource allocation modeling, facility location, layout, aggregate planning, scheduling, and material requirements planning. Survey of major OPS strategies such as: just-in-time production, total quality management, business process reengineering, synchronous manufacturing, enterprise resource planning, and supply chain management. Not open to students in the School of Business Administration or to those with credit in OPS 301. Student must show aptitude in quantitative materials. Prerequisite(s): (BAI 103L or equivalent); (MTH 128, MTH 129 or equivalent); junior standing; permission of department chairperson; DSC 211 or equivalent recommended.

**OPS 301. Survey of Operations & Supply Management. 3 Hours**

Concepts and OPS software-based techniques of designing, implementing, managing, and improving operations in manufacturing and service organizations, including project management, service systems design, resource allocation modeling, facility location, layout, aggregate planning, scheduling, and material requirements planning. Survey of major OPS strategies such as: just-in-time production, total quality management, business process reengineering, synchronous manufacturing, enterprise resource planning, and supply chain management. Prerequisite(s): DSC 211 (may be taken as a corequisite).

**OPS 301H. Survey of Operations & Supply Management. 3 Hours**

Concepts and OPS software-based techniques of designing, implementing, managing, and improving operations in manufacturing and service organizations, including project management, service systems design, resource allocation modeling, facility location, layout, aggregate planning, scheduling, and material requirements planning. Survey of major OPS strategies such as: just-in-time production, total quality management, business process reengineering, synchronous manufacturing, enterprise resource planning, and supply chain management. Prerequisite(s): DSC 211 (may be taken as a corequisite).

**OPS 350. Business Process Management. 3 Hours**

Analytical and empirical tools for evaluation of operations in manufacturing/service firms. Analytical methods may include flow diagrams, Little's Law, queuing theory, theoretical flow times, critical path networks, resource capacity, and estimates of system flow. Empirical methods include quality sampling and discrete event simulation. Students receive training in simulation software. Projects or case studies require creative problem solving for realist business problems. Prerequisite(s): DSC 211; OPS 301 (may be taken as a corequisite); Business majors only or permission of department chairperson.

**OPS 401. Operations Planning & Control. 3 Hours**

Concepts and techniques in the planning and control of operations. Advanced treatment topics include: forecasting for operations, operations sequencing and scheduling, inventory and production control, production planning system design, MRP/ERP, warehouse management, purchasing and physical distribution, balanced attention to technical as well as the managerial aspects of operations planning and control. Prerequisite(s): DSC 211; DSC 375 (may be taken as a corequisite); OPS 301.

**OPS 401H. Operations Planning & Control. 3 Hours**

Concepts and techniques in the planning and control of operations.

Advanced treatment topics include: forecasting for operations, operations sequencing and scheduling, inventory and production control, production planning system design, MRP/ERP, warehouse management, purchasing and physical distribution, balanced attention to technical as well as the managerial aspects of operations planning and control. Prerequisite(s): DSC 211; DSC 375 (may be taken as a corequisite); OPS 301.

**OPS 413. Project Management. 3 Hours**

Broad coverage of technical and human management issues in projects. Emphasis on project planning, scheduling, tracking, and close-down.

Task time and cost estimation and description. Use of computer software. Team building and other aspects of managing project teams. Prerequisite(s): OPS 301.

**OPS 430. Quality & Just in Time Manufacturing. 3 Hours**

The concepts of just-in-time manufacturing, total quality system, and statistical process control. Projects, tours, and guest speakers. Prerequisite(s): OPS 301.

**OPS 440. Continuous Improvement. 3 Hours**

Theory and practice of continuous improvement especially as applied in manufacturing; comparison to the traditional operations management approach, tools and techniques, the KAIZEN approach. Prerequisite(s): OPS 301.

**OPS 480. Supply Chain Management Strategies. 3 Hours**

Concepts, analytical techniques, and solution methods for designing and managing integrated supply chains. Strategic issues of integrated supply chain design and management, including inventory management, logistics network design, distribution systems, strategic alliances, value of information for centralized decisions and risk-pooling, information technology and decision support, and international supply chain management. Prerequisite(s): DSC 211; DSC 375 (may be taken as a corequisite); OPS 301; OPS 350 (may be taken as a corequisite).

**OPS 485. Capstone Operations & Supply Management Project I. 1 Hour**

This course centers on the preparation for an experiential operations improvement project. Students evaluate real-world project proposals from clients, develop clear understanding of operations improvement opportunities, and select projects at hand. Student teams learn about process improvement project design and develop well-defined project plans for execution in OPS 495. Students taking OPS 485 in the fall must take OPS 495 in the subsequent winter semester. Corequisite(s): OPS 401, OPS 480.

**OPS 491H. Honors Thesis. 3 Hours**

Selection, design, investigation, and completion of an independent and original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of the director of the program and the departmental chairperson.

**OPS 492H. Honors Thesis. 3 Hours**

Selection, design, investigation, and completion of an independent and original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of the director of the program and the departmental chairperson.

**OPS 494. Seminar in Operations & Supply Management. 3 Hours**

Study of selected topics or issues in operations management. Topics vary from time to time. May be taken more than once if topics change. Title will reflect topics covered in a particular offering.

**OPS 495. Capstone Operations & Supply Management Project II. 5 Hours**

This course centers on the execution of an experiential project applying operations management concepts and techniques to practical problems with faculty supervision. Student teams address significant operational problems and opportunities in real-world service and manufacturing firms. Teams write recommendation/implementation reports and make presentations of their work. Prerequisite(s): OPS 401, OPS 480, OPS 485.

**OPS 497. Laboratory Work Experience. 1-6 Hours**

Under faculty sponsorship and in association with a participating industrial, commercial, educational, health-care, government, or other organization, practical experience in work associated with the student's major. (See internship coordinator for details.) May satisfy OPS elective, with chairperson approval.

**OPS 498. Cooperative Education. 1-6 Hours**

Optional full-time work period off campus alternating with study period on campus. (See Chapter X; consult Cooperative Education Office for details). Permission of chairperson required.

**OPS 499. Independent Study in Operations & Supply Management. 1-6 Hours**

Research in conjunction with a faculty member on a subject within the general area of operations management. Normally open only to juniors and seniors who have attained a cumulative grade-point average of 3.0 or above. Permission of chairperson required.



# School of Education and Health Sciences

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Kevin R. Kelly, Dean

Kathryn A. Kinnucan-Welsch, Associate Dean for Undergraduate Learning and Community Partnerships

Barbara M. De Luca, Associate Dean for Graduate Education and Research

C. Jayne Brahler, Interim Associate Dean for Graduate Health Programs

In conformity with the University's mission, the School of Education and Health Sciences (SEHS) endeavors to educate distinctive graduates who will effectively and efficiently utilize the highest quality of learning and scholarship and engage people in building strong learning communities and in developing collaborative, dynamic partnerships. The SEHS programs focus on distinctive Catholic and Marianist educational and intellectual traditions which enable graduates to become effective practitioners in the field of professional education and the health sciences. The theme for the SEHS is Building Learning Communities through Critical Reflection.

As a community of learners, collaboration and critical reflection is fostered and encouraged through efforts to integrate and connect knowledge, skills and dispositions gained from various courses in the SEHS and the liberal arts, including the Common Academic Program. This acquaints the students with the major areas of knowledge and provides the basis for their specific program of study. The SEHS is particularly noted for the professional development of teachers and health science professionals who are able to enhance the quality of life experiences for both children and adults. In relation to teaching, the school is committed to quality programs which address the professional preparation of teachers for the early, middle and secondary schools and intervention specialists. In relation to the health sciences, the school is committed to quality programs which address the professional preparation for specialists in exercise science and fitness management, sport management, pre-physical therapy and food and nutrition. Provisions for professional competence are made through:

1. Comprehensive study of the various fields
2. Study of the professional foundations common to all of the program areas
3. Specialized study of the principles underlying a particular area of study
4. Appropriate field-based experiences

Students in the SEHS should appraise their commitment to teaching and the health science professions according to their development in specific knowledge, skills and dispositions. Students will have opportunities to apply theory to practice in planned and supervised field-based experiences. Their programs of study will include reflective practice which will incorporate inquiry leading to self improvement.

The SEHS is committed:

- to education for the improvement of others and society
- to the principles that refer to a shared common humanity
- to the dignity of the person and the use of reason and cooperation in seeking social justice
- to the democratic principles

- to a humanistic approach to learning; and
- to the Marianist traditions in education

## Academic Programs

The SEHS offers the following majors leading to the Bachelor of Science in Education and Health Sciences degree. Additional information specific to each department, including certificate and endorsement programs, may be found under the Programs of Study tab.

### Department of Health and Sport Science

Dietetics (p. 327)  
Exercise Physiology (p. 328)  
Exercise Science (p. 327)  
Nutrition and Fitness (p. 330)  
Pre-Physical Therapy (p. 331)  
Sport Management (p. 332)

### Department of Teacher Education

Adolescence to Young Adult Education (p. 340)  
Early Childhood Education (p. 341)  
Early Childhood Leadership and Advocacy (p. 342)  
Foreign Language Education (Multi-Age P-12) (p. 343)  
Intervention Specialist (Special Education) (p. 344)  
Middle Childhood Education (p. 345)  
Secondary Catholic Religion Education (p. 346)

Students who major in the College of Arts and Sciences can also earn a teaching license (p. 326).

## Degree Requirements

To be awarded the bachelor's degree by the School of Education and Health Sciences, it is necessary to complete all requirements as stipulated by the catalog and department policy. The final 30 semester hours must be earned at the University of Dayton.

## Licensure for Students in Arts and Sciences

### B.A. or B.S. and B.S.E.

Students earning a Bachelor of Arts or a Bachelor of Science in the College of Arts and Sciences who wish to complete the requirements for a teaching license in the state of Ohio may do this by also completing the requirements for the Bachelor of Science in Education and Health Sciences. The dual degree option requires students to complete all course and academic requirements, including specific minimum GPA requirements, in both academic units. Some overlap of degree requirements may exist and students are encouraged to meet with an adviser to obtain a clear understanding of the total academic work needed for the dual degree option. For a full description of the requirements for the teacher licensure programs in the Department of Teacher Education, see Programs of Study (<https://nextcatalog.udayton.edu/undergraduate/schoolofeducationandhealthsciences/programsofstudy/teachereducation>).

## Transfer Students

The School of Education and Health Sciences welcomes transfer students into our programs. Students should contact either the SEHS Student Services and Licensure Office or the Departments of Health and Sport Science and Teacher Education for additional information.

## Programs of Study

To learn more about the available programs in the School of Education and Health Sciences, explore the departments.

- Health and Sport Science (p. 327)
- Teacher Education (p. 339)

## Health and Sport Science (HSS)

Majors:

- Bachelor of Science in Education and Health Sciences, Dietetics (p. 327)
- Bachelor of Science in Education and Health Sciences, Exercise Physiology (p. 328)
- Bachelor of Science in Education and Health Sciences, Exercise Science (p. 329)
- Bachelor of Science in Education and Health Sciences, Nutrition and Fitness (p. 330)
- Bachelor of Science in Education and Health Sciences, Pre-Physical Therapy (p. 331)
- Bachelor of Science in Education and Health Sciences, Sport Management (p. 332)

The undergraduate mission of the Department of Health and Sport Science is to prepare students to be proficient and professional in the disciplines of dietetics and nutrition, exercise physiology, exercise science, pre-physical therapy, and sport management.

The Dietetics and Nutrition Programs prepare students for post-baccalaureate dietetic internships or preprofessional practice programs.

Exercise Physiology students prepare to pursue research careers in exercise science, medicine or health.

The Exercise Science Program is designed to prepare students for professional opportunities in corporate fitness, wellness and health maintenance programs in a variety of settings.

The Pre-Physical Therapy Program will prepare students for graduate school in physical therapy and other allied health professions.

The Sport Management Program prepares students for professional opportunities in:

- Division I and professional sports
- Sports organizations/federations
- Newspapers
- Television
- Sporting goods
- And the many areas of recreation

Along with minimum ACT/SAT scores, minimum cumulative GPAs are required for students wishing to transfer into the department.

### Faculty

Lloyd L. Laubach, Chairperson

Professors Emeriti: Drees, Leonard, Roberts, Schleppe, Siciliano  
Professor: Titlebaum

Associate Professors: Daprano, DeMarco, Laubach, Linderman

Assistant Professors: Crecelius, Cuy Castellanos

Lecturers: Dalton, Gallo, Ritterhoff

## Bachelor of Science IN EDUCATION AND HEALTH SCIENCES with a major in Dietetics (EHA) minimum of 123 credit hours

This program, which leads to a Bachelor of Science degree, prepares students who wish to become registered dietitians. It has a strong science component.

During the last semester of their senior year, students make application to a dietetic internship program. These post-baccalaureate programs are usually eight to eleven months in length and will qualify the student to sit for examination to become registered dietitians. Acceptance into the internship program is highly competitive and is based on the student's grades, work experience, recommendation letters, and extra curricular activities. Selection is made through computer matching.

Costs of the didactic program in dietetics may also include laboratory fees, the purchase of a lab coat, and membership fees for the Student Dietetic Association and the Academy of Nutrition and Dietetics. No liability insurance is needed since the students in this program do not participate in a practice setting.

The didactic program in dietetics is currently granted initial accreditation by the Commission on Accreditation for Dietetics Education (CADE), Suite 2000, 120 South Riverside Plaza, Chicago, Illinois 60606, Phone: (900) 877-1600.

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup> 12

HST 103 West and the World

REL 103 Introduction to Religious and Theological Studies

PHL 103 Intro To Philosophy

ENG 100 Writing Seminar I <sup>2</sup>

Second-Year Writing Seminar <sup>3</sup> 0-3

ENG 200 Writing Seminar II

Oral Communication 3

CMM 100 Principles of Oral Communication

Mathematics 3

Social Science 3

Arts 3

Natural Sciences <sup>4</sup> 7

Crossing Boundaries variable credit

Faith Traditions

Practical Ethical Action

Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

- <sup>1</sup> Completed with ASI 110 and ASI 120.
- <sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.
- <sup>3</sup> Completed with ENG 200H or ASI 120.
- <sup>4</sup> Must include two different disciplines and accompanying lab.

### Major Requirements

ACC 200	Introduction to Accounting	3
BIO 151	Concepts of Biology I: Cell & Molecular Biology (Satisfies CAP Natural Sciences)	3
BIO 152	Concepts of Biology II: Evolution & Ecology	3
BIO 312	General Genetics	3
BIO 411	General Microbiology	3
CHM 123 & 123L	General Chemistry and General Chemistry Laboratory (Satisfies CAP Natural Sciences)	4
CHM 124 & 124L	General Chemistry and General Chemistry Laboratory	4
CHM 313	Organic Chemistry	3
ENG 370	Report & Proposal Writing (Any satisfies CAP Inquiry)	3
or ENG 371	Technical Communication	
or ENG 372	Business Communication	
or ENG 373	Medical Writing	
HSS 101	Introduction to the University Experience	1
HSS 113	Introduction to Dietetics & Nutrition	2
HSS 210 & 210L	Introductory Foods and Introductory Foods Laboratory	4
HSS 295	Nutrition & Health (Satisfies CAP Integrative)	3
HSS 302	Global & Cultural Nutrition (Satisfies CAP Diversity and Social Justice)	3
HSS 303	Food Service Systems Management	2
HSS 304	Institutional Quantity Food Buying	3
HSS 305	Human Anatomy	3
HSS 305L	Human Anatomy Laboratory	1
HSS 307	Human Physiology	3
HSS 345	Medical Evaluation & Terminology	3
HSS 401	Nutritional Biochemistry I	3
HSS 402	Nutrition for the Aging Adult	2
HSS 406	Nutrition for Mother & Child	2
HSS 428	Research in Physical Activity & Health	3
HSS 439	Professional Seminar in Dietetics	2
HSS 456	Nutritional Biochemistry II	3
HSS 495	Medical Nutrition Therapy I	3
HSS 496	Medical Nutrition Therapy II (Satisfies CAP Capstone)	3

HST 341	Historical Perspectives on Science, Technology & Society (Satisfies CAP Adv Studies in HST)	3
or HST 344	History of Science, Technology & the Modern Corporation	
or HST 355	American Urban History	
or HST 376	Social & Cultural History of the United States	
MGT 301	Organizational Behavior	3
or HSS 356	Human Resources Management in Sport	
MTH 207	Introduction to Statistics (Satisfies CAP Mathematics)	3
PHL 312	Ethics (Any satisfies CAP Practical Ethical Action and Adv Studies in REL/PHL )	3
or PHL 313	Business Ethics	
or PHL 315	Medical Ethics	
or REL 360	Christian Ethics	
or REL 367	Christian Ethics & Health Care Issues	
or REL 368	Practical wisdom in the business world	
PSY 101	Introductory Psychology	3
PSY 431	Interviewing & Counseling	3
CAP Arts Elective		3
CAP REL/Faith Traditions Elective		3

## Bachelor of Science IN EDUCATION AND HEALTH SCIENCES with a major in Exercise Physiology (EEP) minimum of 131 credit hours

With its increased emphasis on the sciences, this program is more appropriate for students interested in pursuing research careers in exercise science, medicine or health (M.S., Ph.D. degrees).

### Common Academic Program (CAP)

*credit hours will vary depending on courses selected		
First-Year Humanities Commons <sup>1</sup>		12
HST 103	West and the World	
REL 103	Introduction to Religious and Theological Studies	
PHL 103	Intro To Philosophy	
ENG 100	Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>		0-3
ENG 200	Writing Seminar II	
Oral Communication		3
CMM 100	Principles of Oral Communication	
Mathematics		3
Social Science		3
Arts		3
Natural Sciences <sup>4</sup>		7
Crossing Boundaries		variable credit
Faith Traditions		
Practical Ethical Action		
Inquiry		
Integrative		

Advanced Study	variable credit
Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

- <sup>1</sup> Completed with ASI 110 and ASI 120.
- <sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.
- <sup>3</sup> Completed with ENG 200H or ASI 120.
- <sup>4</sup> Must include two different disciplines and accompanying lab.

### Major Requirements

BIO 151	Concepts of Biology I: Cell & Molecular Biology (Satisfies CAP Natural Sciences)	3
BIO 151L	Concepts of Biology Laboratory: Cell & Molecular Biology	1
BIO 152 & 152L	Concepts of Biology II: Evolution & Ecology and Concepts of Biology Laboratory II: Evolution & Ecology	4
BIO 312	General Genetics	3
BIO 403 & 403L	Physiology I and Physiology Laboratory I	4
CHM 123 & 123L	General Chemistry and General Chemistry Laboratory (Satisfies CAP Natural Sciences)	4
CHM 124 & 124L	General Chemistry and General Chemistry Laboratory	4
CHM 313 & 313L	Organic Chemistry and Organic Chemistry Laboratory (Satisfies CAP Inquiry)	4
CHM 314 & 314L	Organic Chemistry and Organic Chemistry Laboratory	4
CHM 420	Biochemistry	3
HSS 101	Introduction to the University Experience	1
HSS 112	Introduction to Exercise Science & Fitness Management	2
HSS 121	Fitness for Life	2
HSS 275	History of Physical Education & Sport (Satisfies CAP Adv Study in HST and Diversity and Social Justice)	3
HSS 295	Nutrition & Health (Satisfies CAP Integrative)	3
HSS 305 & 305L	Human Anatomy and Human Anatomy Laboratory	4
HSS 307	Human Physiology	3
HSS 335	Introduction to Athletic Training	3
HSS 345	Medical Evaluation & Terminology	3
HSS 405	Tests & Measurements in Sport Science	3
HSS 408 & 408L	Physiology of Exercise and Physiology of Exercise Laboratory	4
HSS 409 & 409L	Kinesiology and Kinesiology Laboratory	4
HSS 422	Exercise for Special Populations	3
HSS 428	Research in Physical Activity & Health	3
HSS 455	Selected Studies in Exercise Science (Satisfies CAP Capstone)	1-3

MTH 148	Introductory Calculus I	3
MTH 207	Introduction to Statistics (Satisfies CAP Mathematics)	3
PHL 312	Ethics (Any satisfies CAP Practical Ethical Action and Adv Study in REL/PHL)	3
or PHL 313	Business Ethics	
or PHL 315	Medical Ethics	
or REL 360	Christian Ethics	
or REL 367	Christian Ethics & Health Care Issues	
or REL 368	Practical wisdom in the business world	
PHY 201 & 201L	General Physics and General Physics Laboratory	4
PHY 202 & 202L	General Physics and General Physics Laboratory	4
PSY 101	Introductory Psychology	3
PSY 251	Human Growth & Development	3
PSY 366	Health Psychology	3
CAP Arts Elective		3
CAP REL/Faith Traditions Elective		3

## Bachelor of Science IN EDUCATION AND HEALTH SCIENCES with a major in Exercise Science (EES) minimum of 125 credit hours

Wellness is no longer a health trend or fad, it has become a lifestyle. Career opportunities available to graduates include:

- Exercise program directors in business, industry, hospitals, and communities
- Cardiac rehabilitators
- Health and fitness club managers

Specific functions include testing, research, evaluating and prescribing exercise-related activities, and promoting wellness programs.

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>		12
HST 103	West and the World	
REL 103	Introduction to Religious and Theological Studies	
PHL 103	Intro To Philosophy	
ENG 100	Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>		0-3
ENG 200	Writing Seminar II	
Oral Communication		3
CMM 100	Principles of Oral Communication	
Mathematics		3
Social Science		3
Arts		3
Natural Sciences <sup>4</sup>		7
Crossing Boundaries		variable credit
Faith Traditions		



Practical Ethical Action Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

### Major Requirements

ACC 200	Introduction to Accounting	3
BIO 151	Concepts of Biology I: Cell & Molecular Biology (Satisfies CAP Natural Science)	3
BIO 151L	Concepts of Biology Laboratory: Cell & Molecular Biology	1
BIO 152 & 152L	Concepts of Biology II: Evolution & Ecology and Concepts of Biology Laboratory II: Evolution & Ecology	4
CHM 123 & 123L	General Chemistry and General Chemistry Laboratory (Satisfies CAP Natural Sciences)	4
CHM 124 & 124L	General Chemistry and General Chemistry Laboratory	4
CMM 332	Publication Design	3
ECO 203	Principles of Microeconomics	3
ENG 370	Report & Proposal Writing (Satisfies CAP Inquiry)	3
or ENG 371	Technical Communication	
or ENG 372	Business Communication	
or ENG 373	Medical Writing	
HSS 101	Introduction to the University Experience	1
HSS 112	Introduction to Exercise Science & Fitness Management	2
HSS 121	Fitness for Life	2
HSS 182	Aerobic Conditioning	2
HSS 275	History of Physical Education & Sport (Satisfies Adv Study in HST and Diversity and Social Justice)	3
HSS 295	Nutrition & Health (Satisfies CAP Integrative)	3
HSS 305 & HSS 307L	Human Anatomy and Human Physiology Laboratory	4
HSS 307 & 307L	Human Physiology and Human Physiology Laboratory	4
HSS 320	Essentials of Strength Conditioning	3
or HSS 321	Essentials of Personal Training	
HSS 335	Introduction to Athletic Training	3
HSS 345	Medical Evaluation & Terminology	3
HSS 405	Tests & Measurements in Sport Science	3
HSS 408 & 408L	Physiology of Exercise and Physiology of Exercise Laboratory	4

HSS 409 & 409L	Kinesiology and Kinesiology Laboratory	4
HSS 422	Exercise for Special Populations	3
HSS 428	Research in Physical Activity & Health	3
HSS 431	Nutrition for Exercise & Sport Science	3
HSS 448	Safety & the Law in Physical Education & Sports	3
HSS 490	Exercise Science Internship - On Campus (Check on 490 vs 491)	2
HSS 491	Exercise Science Internship	1-3
MTH 207	Introduction to Statistics (Satisfies CAP Mathematics)	3
PHL 312	Ethics (Satisfies CAP Practical Ethical Action and Adv Study in REL/PHL)	3
or PHL 313	Business Ethics	
or PHL 315	Medical Ethics	
or REL 360	Christian Ethics	
or REL 367	Christian Ethics & Health Care Issues	
or REL 368	Practical wisdom in the business world	
PSY 101	Introductory Psychology	3
PSY 251	Human Growth & Development	3
CAP Arts Elective		3
CAP REL/Faith Traditions Elective		3

## Bachelor of Science IN EDUCATION AND HEALTH SCIENCES with a major in Nutrition and Fitness (EHN) minimum of 125 credit hours

This program offers classes from both the nutrition and exercise curriculum. Those who select the EHN major may take additional classes to qualify them to apply for a dietetic internship following graduation. Students may also fulfill medical or dental schools' requirements with this program.

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup> 12

HST 103	West and the World
REL 103	Introduction to Religious and Theological Studies
PHL 103	Intro To Philosophy
ENG 100	Writing Seminar I <sup>2</sup>

Second-Year Writing Seminar <sup>3</sup> 0-3

ENG 200	Writing Seminar II
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Oral Communication 3

CMM 100	Principles of Oral Communication
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Mathematics 3

Social Science 3

Arts 3

Natural Sciences <sup>4</sup> 7

Crossing Boundaries variable credit

Faith Traditions

Practical Ethical Action	
Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

### Major Requirements

ACC 200	Introduction to Accounting	3
BIO 151	Concepts of Biology I: Cell & Molecular Biology (Satisfies CAP Natural Sciences)	3
BIO 151L	Concepts of Biology Laboratory: Cell & Molecular Biology	1
BIO 152	Concepts of Biology II: Evolution & Ecology	3
BIO 152L	Concepts of Biology Laboratory II: Evolution & Ecology	1
CHM 123 & 123L	General Chemistry and General Chemistry Laboratory (Satisfies CAP Natural Sciences)	4
CHM 124 & 124L	General Chemistry and General Chemistry Laboratory	4
ENG 370	Report & Proposal Writing (Any satisfies CAP Inquiry)	3
or ENG 371	Technical Communication	
or ENG 372	Business Communication	
or ENG 373	Medical Writing	
HSS 101	Introduction to the University Experience	1
HSS 112	Introduction to Exercise Science & Fitness Management	2
HSS 113	Introduction to Dietetics & Nutrition	2
HSS 275	History of Physical Education & Sport (Satisfies CAP Adv Study in HST and Diversity and Diversity and Social Justice)	3
HSS 295	Nutrition & Health (Satisfies CAP Integrative)	3
HSS 302	Global & Cultural Nutrition (Satisfies CAP Diversity and Social Justice)	3
HSS 305 & 305L	Human Anatomy and Human Anatomy Laboratory	4
HSS 307 & 307L	Human Physiology and Human Physiology Laboratory	4
HSS 320	Essentials of Strength Conditioning	3
HSS 345	Medical Evaluation & Terminology	3
HSS 356	Human Resources Management in Sport	3
HSS 357	Sports Marketing	3
or MKT 300	Survey of Marketing	
HSS 402	Nutrition for the Aging Adult	2
HSS 406	Nutrition for Mother & Child	2

HSS 405	Tests & Measurements in Sport Science	3
HSS 408 & 408L	Physiology of Exercise and Physiology of Exercise Laboratory	4
HSS 422	Exercise for Special Populations	3
HSS 428	Research in Physical Activity & Health	3
HSS 431	Nutrition for Exercise & Sport Science	3
HSS 448	Safety & the Law in Physical Education & Sports	3
HSS 490	Exercise Science Internship - On Campus (Satisfies CAP Capstone)	2
HSS 491	Exercise Science Internship	1-3
MTH 207	Introduction to Statistics (Satisfies CAP Mathematics)	3
PHL 312	Ethics (Any satisfies CAP Practical Ethical Action and Adv Study in REL/PHL)	3
or PHL 313	Business Ethics	
or PHL 315	Medical Ethics	
or REL 360	Christian Ethics	
or REL 367	Christian Ethics & Health Care Issues	
or REL 368	Practical wisdom in the business world	
PSY 101	Introductory Psychology	3
PSY 251	Human Growth & Development	3
CAP Arts Elective		3
CAP REL/Faith Traditions Elective		3

## Bachelor of Science IN EDUCATION AND HEALTH SCIENCES with a major in Pre-Physical Therapy (ept) minimum of 123 credit hours

The Pre-Physical Therapy program is focused on preparing students for entrance to graduate programs in physical therapy. It is designed to optimize graduates' chances of being accepted into some of the top physical therapy schools in the country. These graduate programs are highly selective, and both the undergraduate curriculum and the student's performance are considered in this competitive screening. Employment opportunities for physical therapists are growing faster than any other segment of the healthcare industry. Because of the depth and breadth of the curriculum, a graduate will also have preparation for careers in fitness management and sports rehabilitation.

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
HST 103	West and the World
REL 103	Introduction to Religious and Theological Studies
PHL 103	Intro To Philosophy
ENG 100	Writing Seminar I <sup>2</sup>
Second-Year Writing Seminar <sup>3</sup>	0-3
ENG 200	Writing Seminar II
Oral Communication	3
CMM 100	Principles of Oral Communication
Mathematics	3
Social Science	3
Arts	3

Natural Sciences <sup>4</sup>	7	HSS 408 & 408L	Physiology of Exercise and Physiology of Exercise Laboratory	4
Crossing Boundaries	variable credit	HSS 409 & 409L	Kinesiology and Kinesiology Laboratory	4
Faith Traditions		HSS 428	Research in Physical Activity & Health	3
Practical Ethical Action Inquiry		HSS 465	Physical Therapy Seminar (Satisfies CAP Capstone)	3
Integrative		MTH 148	Introductory Calculus I	3
Advanced Study	variable credit	MTH 207	Introduction to Statistics (Satisfies CAP Mathematics)	3
Philosophy and/or Religious Studies		PHL 312	Ethics (Any satisfies CAP Practical Ethical Action and Adv Study in REL/PHL)	3
Historical Studies		or PHL 313	Business Ethics	
Diversity and Social Justice	3	or PHL 315	Medical Ethics	
Major Capstone	0-3	or REL 360	Christian Ethics	
		or REL 367	Christian Ethics & Health Care Issues	
		or REL 368	Practical wisdom in the business world	

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

### Major Requirements

BIO 151	Concepts of Biology I: Cell & Molecular Biology (Satisfies CAP Natural Sciences)	3
BIO 151L	Concepts of Biology Laboratory: Cell & Molecular Biology	1
BIO 152 & 152L	Concepts of Biology II: Evolution & Ecology and Concepts of Biology Laboratory II: Evolution & Ecology	4
BIO 309	Comparative Anatomy of the Vertebrates	3
CHM 123 & 123L	General Chemistry and General Chemistry Laboratory (Satisfies CAP Natural Sciences)	4
CHM 124 & 124L	General Chemistry and General Chemistry Laboratory	4
CHM 313 & 313L	Organic Chemistry and Organic Chemistry Laboratory (Satisfies CAP Inquiry)	4
HSS 101	Introduction to the University Experience	1
HSS 114	Introduction to Physical Therapy	1
HSS 121	Fitness for Life	2
HSS 220	Adapted Physical Activity	3
HSS 275	History of Physical Education & Sport (Satisfies CAP Adv Study in HST and Diversity and Social Justice)	3
HSS 295	Nutrition & Health (Satisfies CAP Integrative)	3
HSS 305 & 305L	Human Anatomy and Human Anatomy Laboratory	4
HSS 307 & 307L	Human Physiology and Human Physiology Laboratory	4
HSS 320	Essentials of Strength Conditioning	3
or HSS 321	Essentials of Personal Training	
or HSS 422	Exercise for Special Populations	
or HSS 431	Nutrition for Exercise & Sport Science	
HSS 335	Introduction to Athletic Training	3
HSS 345	Medical Evaluation & Terminology	3
HSS 405	Tests & Measurements in Sport Science	3

PHY 201 & 201L	General Physics and General Physics Laboratory	4
PHY 202 & 202L	General Physics and General Physics Laboratory	4
PSY 101	Introductory Psychology	3
PSY 251	Human Growth & Development	3
PSY 363	Abnormal Psychology	3
SOC 204	Modern Social Problems (Satisfies CAP Socail Science )	3
or SSC 200	Social Science Integrated	
CAP Arts Elective		3
CAP REL/Faith Traditions Elective		3

## Bachelor of Science IN EDUCATION AND HEALTH SCIENCES with a major in Sport Management (esm) minimum of 126 credit hours

The Sport Management program prepares students for opportunities in sport, event and facility management. In particular, Sport Management professionals gain positions in collegiate and professional organizations, sport clubs and athletic federations, as well as public and private recreation. Opportunities are also available in arenas and convention centers, event management and all forms of media.

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
HST 103	West and the World
REL 103	Introduction to Religious and Theological Studies
PHL 103	Intro To Philosophy
ENG 100	Writing Seminar I <sup>2</sup>
Second-Year Writing Seminar <sup>3</sup>	0-3
ENG 200	Writing Seminar II
Oral Communication	3
CMM 100	Principles of Oral Communication

Mathematics	3
Social Science	3
Arts	3
Natural Sciences <sup>4</sup>	7
Crossing Boundaries	variable credit
Faith Traditions	
Practical Ethical Action	
Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

#### Major Requirements

HSS 101	Introduction to the University Experience	1
HSS 111	Introduction to Sport Management	3
HSS 250	Principles of Sport Management	3
HSS 253	Sport Facility Operations	3
HSS 255	Sport Management Practicum	3
HSS 285	Sport Management Field Experience	3
HSS 330	Leadership in Sport	3
HSS 331	Sport Ethics	3
HSS 349	Financing Sport Operations	3
HSS 350	Business of Soccer	3
HSS 353	Sports Media	3
HSS 354	Sport in the Global Community (Satisfies CAP Diversity and Social Justice)	3
HSS 356	Human Resources Management in Sport	3
HSS 357	Sports Marketing	3
HSS 358	Sales & Fundraising in Sport	3
HSS 360	Sport and Bodies	3
HSS 448	Safety & the Law in Physical Education & Sports	3
HSS 485	Sport Management Internship (Satisfies CAP Capstone)	3
CPS 111	Introduction to Personal Computers	3
MTH 207	Introduction to Statistics (Satisfies CAP Mathematics)	3
Courses in Business Minor		18
Courses in Professional Competency		12

• Bachelor of Science in Education and Health Sciences, Dietetics (p. 333)

• Bachelor of Science in Education and Health Sciences, Exercise Physiology (p. 334)

- Bachelor of Science in Education and Health Sciences, Exercise Science (p. 334)
- Bachelor of Science in Education and Health Sciences, Nutrition and Fitness (p. 334)
- Bachelor of Science in Education and Health Sciences, Pre-Physical Therapy (p. 335)
- Bachelor of Science in Education and Health Sciences, Sport Management (p. 335)

## Dietetics

### First Year

Fall	Hours Spring	Hours
HSS 101	1 PHL 103	3
BIO 151	3 BIO 152	3
HSS 113	2 HST 103	3
CMM 100	3 CHM 124 & 124L	4
REL 103	3 ENG 100	3
CHM 123 & 123L	4	
	<b>16</b>	<b>16</b>

### Second Year

Fall	Hours Spring	Hours
HSS 305 & 305L	4 HSS 307	3
ACC 200	3 Arts elective	3
HSS 295	3 CHM 313	3
PSY 101	3 ENG 200	3
SSC 200	3 MTH 207	3
	<b>16</b>	<b>15</b>

### Third Year

Fall	Hours Spring	Hours
HSS 406	2 HSS 402	2
HSS 210	2 PSY 431	3
HSS 210L	2 HSS 428	3
HSS 356	3 BIO 411	3
ENG 370, 371, 372, or 373	3 HST 340 or 341	3
HSS 302	3 HSS 345	3
	<b>15</b>	<b>17</b>

### Fourth Year

Fall	Hours Spring	Hours
HSS 304	3 HSS 456	3
HSS 401	3 HSS 496	3
HSS 303	2 BIO 312	3
HSS 495	3 PHL 312, 313, 315, REL 360, REL 367, or REL 368	3
HSS 439	2 Faith Traditions	3
	<b>13</b>	<b>15</b>

Total credit hours: 123



## Exercise Physiology

### First Year

Fall	Hours Spring	Hours
HSS 101	1 ENG 100	3
PHL 103	3 HST 103	3
CHM 123 & 123L	4 CHM 124 & 124L	4
CMM 100	3 BIO 152 & 152L	4
HSS 112	2 REL 103	3
BIO 151 & 151L	4	
	<b>17</b>	<b>17</b>

### Second Year

Fall	Hours Spring	Hours
HSS 295	3 HSS 307	3
HSS 305 & 305L	4 CHM 314 & 314L	4
CHM 313 & 313L	4 ENG 200	3
MTH 207	3 MTH 148	3
SSC 200	3 PSY 101	3
	HSS 121	2
	<b>17</b>	<b>18</b>

### Third Year

Fall	Hours Spring	Hours
HSS 345	3 HSS 275	3
PHY 201 & 201L	4 HSS 428	3
PSY 251	3 BIO 312	3
PHL 312, 313, 315, REL 360, REL 367, or REL 368	3 PHY 202 & 202L	4
HSS 335	3 VAF 203, 225, VAP 100, or VAP 200	3
	<b>16</b>	<b>16</b>

### Fourth Year

Fall	Hours Spring	Hours
HSS 422	3 HSS 409 & 409L	4
HSS 455	1-3 BIO 403 & 403L	4
CHM 420	3 Faith Traditions	3
PSY 366	3 HSS 405	3
HSS 408 & 408L	4	
	<b>14-16</b>	<b>14</b>

Total credit hours: 129-131

## Exercise Science

### First Year

Fall	Hours Spring	Hours
HSS 101	1 ENG 100	3
HSS 112	2 HST 103	3

BIO 151 & 151L	4 BIO 152 & 152L	4
CMM 100	3 REL 103	3
PHL 103	3 PSY 101	3
HSS 182	2	
	<b>15</b>	<b>16</b>

### Second Year

Fall	Hours Spring	Hours
HSS 295	3 HSS 307 & 307L	4
HSS 305 & 305L	4 CHM 124 & 124L	4
ACC 200	3 PHL 312, 313, 315, REL 360, REL 367, or REL 368	3
CHM 123 & 123L	4 ENG 200	3
SSC 200	3 PSY 251	3
	<b>17</b>	<b>17</b>

### Third Year

Fall	Hours Spring	Hours
HSS 275	3 HSS 121	2
HSS 335	3 HSS 408 & 408L	4
HSS 345	3 HSS 431	3
ECO 203	3 ENG 370, 371, or 372	3
HSS 320 or 321	3 MTH 207	3
	<b>15</b>	<b>15</b>

### Fourth Year

Fall	Hours Spring	Hours Summer	Hours
HSS 422	3 HSS 405	3 HSS 491	3
HSS 448	3 HSS 409 & 409L	4	
HSS 490	2 HSS 428	3	
CMM 332	3 Arts elective	3	
Faith Traditions	3		
	<b>14</b>	<b>13</b>	<b>3</b>

Total credit hours: 125

## Nutrition and Fitness

### First Year

Fall	Hours Spring	Hours
HSS 101	1 BIO 152 & 152L	4
HSS 113	2 CHM 124 & 124L	4
BIO 151 & 151L	4 ENG 100	3

CHM 123 & 123L	4 HST 103	3
CMM 100	3 PHL 103	3
REL 103	3	
	<b>17</b>	<b>17</b>
<b>Second Year</b>		
<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
HSS 112	2 HSS 295	3
HSS 121	2 HSS 307 & 307L	4
HSS 305 & 305L	4 ENG 200	3
ACC 200	3 PSY 101	3
MTH 207	3	
SSC 200	3	
	<b>17</b>	<b>13</b>
<b>Third Year</b>		
<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
HSS 302	3 HSS 275	3
HSS 356	3 HSS 320	3
HSS 357 or MKT 300	3 HSS 406	2
ENG 370, 371, 372, or 373	3 HSS 345	3
PHL 312, 313, 315, REL 360, REL 367, or REL 368	3 PSY 251	3
	Arts elective	3
	<b>15</b>	<b>17</b>
<b>Fourth Year</b>		
<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
HSS 402	2 HSS 405	3
HSS 408 & 408L	4 HSS 428	3
HSS 422	3 HSS 431	3
HSS 448	3 HSS 491	3
HSS 490	2 Faith Traditions	3
	<b>14</b>	<b>15</b>

Total credit hours: 125

## Pre-Physical Therapy

<b>First Year</b>		
<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
HSS 101	1 ENG 100	3
HSS 114	1 MTH 148	3
CHM 123 & 123L	4 REL 103	3
CMM 100	3 BIO 152 & 152L	4
PHL 103	3 CHM 124 & 124L	4
BIO 151 & 151L	4	
	<b>16</b>	<b>17</b>

<b>Second Year</b>		
<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
HSS 295	3 PHY 202 & 202L	4
HSS 305 & 305L	4 SSC 200	3
HST 103	3 ENG 200	3
PHY 201 & 201L	4 HSS 307 & 307L	4
HSS 220	3 PSY 101	3
	<b>17</b>	<b>17</b>
<b>Third Year</b>		
<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
CHM 313 & 313L	4 HSS 465	3
MTH 207	3 PSY 251	3
VAF 203, 225, VAP 100, or VAP 200	3 Faith Traditions	3
HSS 335	3 HSS 121	2
HSS 345	3 HSS 275	3
	<b>16</b>	<b>14</b>
<b>Fourth Year</b>		
<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
PHL 312, 313, 315, REL 360, REL 367, or REL 368	3 HSS 405	3
HSS 408 & 408L	4 HSS 409 & 409L	4
HSS 320, 321, 422, or 431	3 HSS 428	3
PSY 363	3 BIO 309	3
	<b>13</b>	<b>13</b>

Total credit hours: 123

## Sport Management

<b>First Year</b>		
<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
HSS 101	1 HSS 250	3
HSS 111	3 ENG 100	3
CMM 100	3 MTH 207	3
HST 103	3 REL 103	3
PHL 103	3 SCI 200, 300, or 310	3-4
SCI 200, 300, or 310	3-4 Natural Science Lab	1
	<b>16-17</b>	<b>16-17</b>
<b>Second Year</b>		
<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
HSS 253	3 HSS 349	3
CPS 111	3 HSS 350	3
ECO 203	3 ACC 200 or 208	3
ENG 200	3 Adv History elective	3

SSC 200	3 Adv Religious Studies elective/ Faith Traditions	3
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### Third Year

Fall	Hours Spring	Hours
HSS 255	3 HSS 353	3
HSS 285	3 HSS 356	3
HSS 331	3 MKT 300	3
MGT 201 or 301	3 Professional Competency	3
Practical Ethical Action/Adv Philosophy elective	3 Arts elective	3
Professional Competency	3	

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### Fourth Year

Fall	Hours Spring	Hours Summer	Hours
HSS 354	3 HSS 330	3 HSS 485	3
HSS 357	3 HSS 360	3	
HSS 358	3 FIN 301	3	
HSS 448	3 MIS 300	3	
Professional Competency	3 Professional Competency	3	
	15	15	3

Total credit hours: 128-130

## Courses

### HSS 101. Introduction to the University Experience. 1 Hour

Examination of the values that foster academic progress in the College, discussion of strategies for taking full advantage of academic opportunities, and integrating formal and experiential learning.

### HSS 111. Introduction to Sport Management. 3 Hours

Course to help the student define professional goals and assess personal strengths and weaknesses in the light of competencies deemed essential for a sport management career.

### HSS 112. Introduction to Exercise Science & Fitness Management. 2 Hours

Course to help the student define professional goals and assess personal strengths and weaknesses in the light of competencies deemed essential for an exercise science and fitness management career.

### HSS 113. Introduction to Dietetics & Nutrition. 2 Hours

To acquaint the students interested in a career in dietetics or nutrition with the professions, roles, responsibilities, and opportunities afforded them. Examples of practice for each area will be explored. Required by all entering first-year students and open to students interested in food and nutrition careers.

### HSS 114. Introduction to Physical Therapy. 1 Hour

An introductory seminar discussing the history, present and future, of physical therapy. A successful undergraduate preparation for entrance into this highly selective graduate program will be this field's secondary focus.

### HSS 115. Introduction to Therapeutic Dosing in the Health Sciences. 3 Hours

Examination of the direct relationship of dosage calculations in the health sciences. Emphasis is on the transfer of basic mathematics skills to application and problem solving in the health sciences.

### HSS 117. Personal & Community Health. 3 Hours

Survey of health science and principles of preventive medicine as introduction to other courses in health and sport science.

### HSS 121. Fitness for Life. 2 Hours

This course will include a combination of classroom lectures covering numerous topics pertaining to health related fitness as well as laboratory activity sessions implementing concepts that foster a healthy, active lifestyle.

### HSS 130. Physical Education Activities. 1 Hour

Selected courses offered to all University students.

### HSS 182. Aerobic Conditioning. 2 Hours

Aerobic conditioning techniques developed primarily through running programs. Required for EES and EDP majors.

### HSS 184. Conditioning. 1 Hour

Course designed for Exercise Science and Pre-Physical Therapy majors to introduce them to concepts and techniques of aerobic conditioning using exercise devices such as treadmills, bicycle ergometers, stairmasters, rowing machines, etc.

### HSS 210. Introductory Foods. 2 Hours

Study of scientific principles applied to the processing and preparation of food to maintain nutritional quality and aesthetic value. Prerequisite(s): CHM 123, CHM 123L.

### HSS 210L. Introductory Foods Laboratory. 2 Hours

Course to accompany HSS 210 lecture. Corequisite(s): HSS 210.

### HSS 220. Adapted Physical Activity. 3 Hours

Course to prepare prospective teachers to adapt a physical education program so all children and youth can successfully participate in activity programs. Study of the atypical child in order to organize and administer a program which will meet individual needs.

### HSS 226. Computer Applications in Sport Science. 3 Hours

The course focuses on understanding the practical uses of computers as a tool in exercise science and sport management activities. Emphasis is placed on demonstrated proficiency in word processing, spreadsheets, graphics, Power Point, and databases and the evaluation and use of specific exercise science and sport management packages. Emphasis will be on use of IBM compatible computers.

### HSS 250. Principles of Sport Management. 3 Hours

Examination of the nature of management from theoretical and practical perspectives in a variety of sport settings. Focus on managerial functions and skills. Prerequisite(s): HSS 111.

### HSS 253. Sport Facility Operations. 3 Hours

The processes of planning, constructing, equipping, maintaining, and operating sport facilities are investigated in this course.

**HSS 255. Sport Management Practicum. 3 Hours**

The sport management practicum and seminar is designed for students to gain insight into a wide array of field experiences within this discipline. Students are given choices of field work within a variety of sport and recreation settings. In addition, a weekly seminar is required as part of the practicum experience.

**HSS 255H. Sport Management Practicum. 3 Hours**

The sport management practicum and seminar is designed for students to gain insight into a wide array of field experiences within this discipline. Students are given choices of field work within a variety of sport and recreation settings. In addition, a weekly seminar is required as part of the practicum experience.

**HSS 275. History of Physical Education & Sport. 3 Hours**

Study of the historical development of physical education and sport as it relates to significant events in the history of Western civilization.

**HSS 275H. History of Physical Education & Sport. 3 Hours**

Study of the historical development of physical education and sport as it relates to significant events in the history of Western civilization.

**HSS 285. Sport Management Field Experience. 3 Hours**

This experience is done after completion of HSS 255. 150 clock hours need to be completed for the 3 semester hour experience.

**HSS 295. Nutrition & Health. 3 Hours**

Study of the nutrient needs of humans and of their choices as modified by socioeconomic, cultural, and life cycle factors.

**HSS 302. Global & Cultural Nutrition. 3 Hours**

Study of the relationship among consumers, the food; the historical evolution of food; socioeconomic influences on food. Prerequisite(s): HSS 295.

**HSS 303. Food Service Systems Management. 2 Hours**

Study of food service organizations and management. Demonstrate the importance of menu as the primary control of the food service system - factors affecting menu planning, customer satisfaction, and management decisions.

**HSS 304. Institutional Quantity Food Buying. 3 Hours**

To study quantity food production in foodservice system through application of principles for determining needs and procuring, producing and storing foods in quantity, along with institutional equipment selection, maintenance, and layout. Prerequisite(s): HSS 210, HSS 210L; a Multipurpose Computer Account (AKA Dial-in/PPP/Flyernet account); basic IBM compatible computer skills.

**HSS 305. Human Anatomy. 3 Hours**

Study of the human body with emphasis on the interdependent relationships of structure and function. Prerequisite(s): CHM 123, CHM 123L, CHM 124, CHM 124L, BIO 151, BIO 151L, BIO 152, BIO 152L.

**HSS 305L. Human Anatomy Laboratory. 1 Hour**

Hands-on study of the human body with emphasis on the interdependent relationships of structure and function through the use of interactive anatomy.

**HSS 307. Human Physiology. 3 Hours**

Survey of the functions of body systems with respect to general cell physiology and specialization into tissues, structural contributions to tissue/organ physiology, pertinent concepts of biochemical physiology, tissue metabolism and energy/food requirements during stress and exercise, recent research into control and regulation of functions of major systems, physiologic limitations outside environmental ranges, and selected examples of pathophysiology. Prerequisite(s): CHM 123, CHM 124, HSS 305, BIO 151, BIO 152.

**HSS 307H. Human Physiology. 3 Hours**

Survey of the functions of body systems with respect to general cell physiology and specialization into tissues, structural contributions to tissue/organ physiology, pertinent concepts of biochemical physiology, tissue metabolism and energy/food requirements during stress and exercise, recent research into control and regulation of functions of major systems, physiologic limitations outside environmental ranges, and selected examples of pathophysiology. Prerequisite(s): CHM 123, CHM 124, HSS 305, BIO 151, BIO 152.

**HSS 307L. Human Physiology Laboratory. 1 Hour**

Virtual human physiological laboratory course meant to enhance the materials covered in HSS 307 - Human Physiology. Laboratory simulations in human physiology to cover concepts such as, but not limited to, cell transport mechanisms and permeability, skeletal muscle physiology, endocrine system physiology, cardiovascular dynamics, cardiovascular physiology, respiratory system mechanics, renal system physiology, and blood analysis. Prerequisite(s): BIO 151, BIO 152; (CHM 123, CHM 124) or equivalent; HSS 305. Corequisite(s): HSS 307.

**HSS 320. Essentials of Strength Conditioning. 3 Hours**

Course designed to prepare students for the certified strength and conditioning specialist (NSCA) exam. Topics included will pertain to muscular strength and endurance conditioning, physiology of strength conditioning, muscular strength testing and evaluation, and organization/administration of strength training programs.

**HSS 321. Essentials of Personal Training. 3 Hours**

To provide students with specific, real-world information regarding the knowledge, skills, and expectations associated with a competent personal trainer or fitness professional. Additionally, this course is designed to prepare students for the nationally accredited Certified Personal Trainer (CPT) certification exam. Prerequisite(s): HSS 305 or BIO 475.

**HSS 325. Women in Sport. 3 Hours**

This course studies concepts about women, sport, and society from both a contemporary and historical perspective in an effort to understand the role of women in sport. Additionally, this course will help students understand the evolution and future of women in sport in both the U.S. and internationally.

**HSS 330. Leadership in Sport. 3 Hours**

As our society and industries adapt and reinvent themselves, especially in the sport (service) industry, there is a need for individuals within organizations to step up to the role of a leader, independent of their formal position. Therefore, the purpose of this course is for students to start (or continue) to develop their self-awareness, understanding, knowledge and practice of leadership.

**HSS 331. Sport Ethics. 3 Hours**

Study of the ethical decisions in sport and athletics, using case analysis and real world examples to assist future sport management professionals to develop a set of moral reasoning skills to self-evaluate, examine, and critically analyze ethical issues they will encounter in their professional careers. Prerequisite(s): Junior/Senior status.

**HSS 335. Introduction to Athletic Training. 3 Hours**

Application of principles and methods involved in prevention, care, and treatment of athletic injuries. Prerequisite(s): HSS 305.

**HSS 335H. Introduction to Athletic Training. 3 Hours**

Application of principles and methods involved in prevention, care, and treatment of athletic injuries. Prerequisite(s): HSS 305.

**HSS 341. Extreme Sports. 3 Hours**

No description available.

**HSS 345. Medical Evaluation & Terminology. 3 Hours**

Medical terminology related to physiological processes.

**HSS 345H. Medical Evaluation & Terminology. 3 Hours**

Medical terminology related to physiological processes.

**HSS 349. Financing Sport Operations. 3 Hours**

The financial concepts and theories and their application in the professional intercollegiate, recreational and commercial sport industries. Topics include revenues and expenses of professional, intercollegiate, and private sport industries; issues affecting these revenues and expenses; fundraising at the intercollegiate level; ownership in sport; and public and private funding for non-profit sports programs.

**HSS 350. Business of Soccer. 3 Hours**

Study of international sport management issues through the perspective of European soccer with particular reference to professional soccer in England including the Premier League, Spain (La Liga), Italy (Serie A), Germany (Bundesliga), the UEFA Champions League, as well as major international governing bodies such as FIFA and UEFA.

**HSS 353. Sports Media. 3 Hours**

This is the study and the appraisal of the media and the role that it plays in contemporary sports. Attention is also given to preparation and evaluation of media sports presentations.

**HSS 354. Sport in the Global Community. 3 Hours**

Analyze the growth and development of sport throughout the global community with an emphasis on the structure and organization of sport. Additionally the production of major sport events, such as the Olympics and World Cup Soccer Tournament, will be examined. Prerequisite(s): HSS 250.

**HSS 354H. Sport in the Global Community. 3 Hours**

Analyze the growth and development of sport throughout the global community with an emphasis on the structure and organization of sport. Additionally the production of major sport events, such as the Olympics and World Cup Soccer Tournament, will be examined. Prerequisite(s): HSS 250.

**HSS 356. Human Resources Management in Sport. 3 Hours**

This course is an overview of leadership and human resource management. The course examines the techniques, policies, processes, strategies, and practices used by health-related and sport companies and managers to effectively and efficiently utilize human resources. Prerequisite(s): HSS 255.

**HSS 357. Sports Marketing. 3 Hours**

Course content is designed to give students an understanding of marketing principles applied to sport, sport events, and sport products. Marketing strategies including the sales, promotions, and advertising of sport will be emphasized.

**HSS 358. Sales & Fundraising in Sport. 3 Hours**

Examination and understanding of sales and fundraising techniques. Students will gain first-hand experience in developing new skills for the job market.

**HSS 358H. Sales & Fundraising in Sport. 3 Hours****HSS 360. Sport and Bodies. 3 Hours**

The purpose of this course is to critically examine the ways in which the human (athletic) body is altered/modified, displayed/portrayed, and valued in terms of gender, race, social class, and disability. This course will address the "nature" and the "nurture" of sports and bodies. The course will examine how bodies are constructed, not just by nature, but by society as well.

**HSS 401. Nutritional Biochemistry I. 3 Hours**

Extension of the student's knowledge of the science of nutrition, stressing the metabolism of food constituents and recent advances in the field of nutrition. Prerequisite(s): (BIO 403 or HSS 307); CHM 314; HSS 295.

**HSS 401H. Nutritional Biochemistry I. 3 Hours**

Extension of the student's knowledge of the science of nutrition, stressing the metabolism of food constituents and recent advances in the field of nutrition. Prerequisite(s): (BIO 403 or HSS 307); CHM 314; HSS 295.

**HSS 402. Nutrition for the Aging Adult. 2 Hours**

The study of the process of aging through adulthood. This will focus on the changes in nutritional needs during the aging process. Attention will be paid to the community resources available to help provide optimum nutrition to healthy people as they age. Prerequisite(s): HSS 295, HSS 305, HSS 307, CHM 123, CHM 124.

**HSS 404. Coaching Internship. 1-3 Hours**

Practical coaching experience working in local schools with interscholastic teams. Elective.

**HSS 405. Tests & Measurements in Sport Science. 3 Hours**

Direct relationship of tests and measurements to the field of sport science.

**HSS 405H. Tests & Measurements in Sport Science. 3 Hours**

Direct relationship of tests and measurements to the field of sport science.

**HSS 406. Nutrition for Mother & Child. 2 Hours**

Physiologic and biochemical principles and results of current research are used to build a foundation for exploration of nutrition from the stages of growth and development, to maturation, and aging. These serve as the basis for consideration of the social, economic, physiologic, and lifestyle factors that influence nutrition status, food choices, and specific life state concerns. Particular attention is paid to using the principles of nutrition in planning and implementing recommendations for dietary change. Prerequisite(s): HSS 295, HSS 307.

**HSS 408. Physiology of Exercise. 3 Hours**

Detailed study of the effects of exercise on human functions, as a basis for the study of physical fitness, motor skills, and athletic training. Prerequisite(s): HSS 305; (HSS 306 or HSS 307).

**HSS 408H. Physiology of Exercise. 3 Hours**

Detailed study of the effects of exercise on human functions, as a basis for the study of physical fitness, motor skills, and athletic training. Prerequisite(s): HSS 305; (HSS 306 or HSS 307).

**HSS 408L. Physiology of Exercise Laboratory. 1 Hour**

Course to accompany HSS 408. Weekly two-hour laboratory stressing practical applications of exercise physiology. Prerequisite(s): HSS 305; (HSS 306 or HSS 307).

**HSS 409. Kinesiology. 3 Hours**

Investigation and analysis of human motion based on anatomical, physiological, and mechanical principles. Prerequisite(s): HSS 305; (HSS 306 or HSS 307).

**HSS 409H. Kinesiology. 3 Hours**

Investigation and analysis of human motion based on anatomical, physiological, and mechanical principles. Prerequisite(s): HSS 305; (HSS 306 or HSS 307).

**HSS 409L. Kinesiology Laboratory. 1 Hour**

Course to accompany HSS 409. Weekly two-hour laboratory stressing the practical application of kinesiology.



**HSS 422. Exercise for Special Populations. 3 Hours**

Course designed to prepare prospective exercise specialists to adapt physical education and exercise so that all individuals can successfully participate in activity programs. A study of various disabilities and conditions in order to organize and administer a program which will meet individual needs.

**HSS 428. Research in Physical Activity & Health. 3 Hours**

An introduction to statistical analysis and research methodology. Emphasis will be on the use of these in determining health statistics, designing and evaluating health studies, accessing data banks; collection, analysis and interpretation of health statistics.

**HSS 428H. Research in Physical Activity & Health. 3 Hours**

An introduction to statistical analysis and research methodology. Emphasis will be on the use of these in determining health statistics, designing and evaluating health studies, accessing data banks; collection, analysis and interpretation of health statistics.

**HSS 431. Nutrition for Exercise & Sport Science. 3 Hours**

Investigation of current research in the nutritional assessment of the athlete. Topics include dietary needs, fluid replenishment, pre-game meals, and "fad" diets for the athlete. Pre-requisite(s): HSS 295.

**HSS 439. Professional Seminar in Dietetics. 2 Hours**

This guided practicum and seminar will provide an opportunity for candidates to develop and apply their knowledge of typical and atypical development from conception to age 3 as they observe young children in an infant/toddler classroom setting. Theories and research based practices related to infant and toddler care and education will be discussed. Candidates will conduct naturalistic assessment, identify developmental milestones and related risk factors, and will plan and execute play-based strategies to support development. 45 contact hours of field experience is required.

**HSS 448. Safety & the Law in Physical Education & Sports. 3 Hours**

Study of the legal aspects of physical education and athletics. Analysis of specific court cases. Formulation of safety policies.

**HSS 448H. Safety & the Law in Physical Education & Sports. 3 Hours**

Study of the legal aspects of physical education and athletics. Analysis of specific court cases. Formulation of safety policies.

**HSS 455. Selected Studies in Exercise Science. 1-3 Hours**

Investigating, analyzing, and reporting on a problem in physical education. Prerequisite(s): Permission of department chairperson.

**HSS 456. Nutritional Biochemistry II. 3 Hours**

Integration and application of principles of physiology, nutrition and biochemistry to the processes of metabolic function.

**HSS 465. Physical Therapy Seminar. 3 Hours**

Addresses current issues facing prospective and present physical therapists in a reforming healthcare industry.

**HSS 485. Sport Management Internship. 3 Hours**

Work experience carried out under the auspices and supervision of the sports management staff. Application and permission of director of Sports Management program required.

**HSS 490. Exercise Science Internship - On Campus. 2 Hours**

Work experience carried out under the auspices and supervision of the University of Dayton Wellness Program staff. Application and permission of director of Exercise Science and Fitness Management program required.

**HSS 491. Exercise Science Internship. 1-3 Hours**

Work experience carried out under the auspices of an industrial, commercial, educational, government or health agency-related wellness program. Application and permission of director of Exercise Science and Fitness Management program required.

**HSS 495. Medical Nutrition Therapy I. 3 Hours**

Study of nutrition care process, nutritional diagnostic therapy and counseling services for the purpose of disease management to include: weight management, eating disorders, upper & lower gastrointestinal disorders, hepatobiliary and pancreatic disorders, and nutrition support. Prerequisite(s): CHM 313, HSS 345, Senior Standing.

**HSS 495H. Medical Nutrition Therapy I. 3 Hours**

Study of nutrition care process, nutritional diagnostic therapy and counseling services for the purpose of disease management to include: weight management, eating disorders, upper & lower gastrointestinal disorders, hepatobiliary and pancreatic disorders, and nutrition support. Prerequisite(s): CHM 313, HSS 345, Senior Standing.

**HSS 496. Medical Nutrition Therapy II. 3 Hours**

Study of nutrition care process, nutritional diagnostic therapy and counseling services for the purpose of disease management to include: Diabetes, Thyroid, Anemia, Cardiovascular, Pulmonary, Renal, Cancer, HIV, Metabolic Stress, Rheumatic, Neurologic, and Psychiatric Conditions. Prerequisite(s): CHM 313, HSS 345, HSS 495, Senior standing.

**HSS 498H. Honors Thesis. 3 Hours**

Selection, design, investigation, and completion of an independent original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of the director of the program and the departmental chairperson.

**HSS 499H. Honors Thesis. 3 Hours**

Selection, design, investigation, and completion of an independent, original research thesis under the guidance of a faculty research director. Restricted to students in the Berry Scholars Program with permission of the program director.

## Teacher Education (EDT)

### Majors:

- Bachelor of Science in Education and Health Sciences, Adolescence to Young Adult Education (p. 340)
- Bachelor of Science in Education (p. 341) and Health Sciences (p. 340), Early Childhood Education (p. 341)
- Bachelor of Science in Education (p. 342) and Health Sciences (p. 340), Early Childhood Leadership and Advocacy (p. 342)
- Bachelor of Science in Education (p. 343) and Health Sciences (p. 340), Foreign Language Education (p. 343)
- Bachelor of Science in Education (p. 344) and Health Sciences (p. 340), Intervention Specialist (p. 344)
- Bachelor of Science in Education (p. 345) and Health Sciences (p. 340), Middle Childhood Education (p. 345)
- Bachelor of Science in Education (p. 346) and Health Sciences (p. 340), Secondary Catholic Religion Education (p. 346)

### Endorsements:

- Early Childhood Generalist (p. 347)
- Prekindergarten Special Needs (p. 347)

- Middle Childhood Generalist (p. 347)

#### Certificates:

- Catholic Education (p. 347)
- Early Childhood Intervention Specialist (p. 348)
- Early Childhood Leadership and Advocacy (p. 348)
- Teaching English to Speakers of Other Languages (p. 348)

#### Faculty

Connie L. Bowman, Chairperson

Professors Emeriti: Frye, Fuchs, Geiger, Joseph, Rowley, Sudzina, Weaver

Professors: Hart, Kinnucan-Welsch, Lasley, Watras

Associate Professors: Adams, Baldwin, Bowman, Collopy, Herrelko, Hunn, Kelly, Richards, White

Assistant Professors: Bogard, Gallagher

Clinical Faculty: Arnold, Engelhardt, Mathes, Nenonene, Sableski, Scheuermann

Lecturer: Comingore

Teacher-in-Residence: Evans

Visiting Professors: Falk, Lawless Frank

The University of Dayton's Department of Teacher Education prepares teachers for the early, middle and secondary grade levels. In addition, the department offers programs in intervention specialist (special education), grades K-12 and foreign language education, grades P-12. The music education and art education programs are offered in the College of Arts and Sciences. It is also possible for students to complete a degree in a teaching field in the College of Arts and Sciences and also complete the Bachelor of Science in Education and Health Sciences leading to licensure.

The department has adopted a theme that is integrated throughout the programs of study, Teacher as Reflective Decision Maker in a Pluralistic Society. This theme aligns with the Marianist mission of the University, the universitywide Student Learning Outcomes and the unit outcomes for the School of Education and Health Sciences (SEHS):

- Embracing diversity
- Building community
- Engaging in critical reflection
- Developing as a scholarly practitioner

The department has established policies that require students to achieve benchmarks and demonstrate professional competencies in coursework and field experiences. Furthermore, all students must complete a good moral character form and BCII and FBI criminal background check prior to field experience in P-12 schools. In order for the University of Dayton to approve the state of Ohio teaching license application, applicants must have on file in the SEHS dean's office passing scores on the state of Ohio licensure tests.

#### Teacher Education Undergraduate Academic policies:

1. Candidates for undergraduate licensure are placed in schools in the Miami Valley area for all clinical experiences. Student teaching is the capstone clinical experience for the preparation programs. Once students have been approved and placed for student teaching, they may not withdraw from the program except with the approval of the department chair. A student who withdraws without this approval forfeits future placement in student teaching.

2. An education course taken as an independent study cannot be applied toward teacher licensure.
3. Independent study is not available for regularly scheduled undergraduate courses.
4. Candidates must meet each of the following benchmarks:
  - Cumulative GPA must be # 2.5 after completing EDT 109; # 2.75 after completing EDT 110; # 3.0 after completing the program specific development course.
  - GPA in each teaching concentration must be # 2.5 prior to entry into the clinical experience (methods).
  - GPA in professional education (EDT) must be # 2.5 after completing EDT 109; # 2.75 after completing EDT 110; # 3.0 after completing the program specific development course.
  - Grade of C- or higher in all EDT courses.
  - Grade of S in all EDT laboratories prior to entry into clinical experience.
  - Unexcused absences in a teacher education course cannot exceed 13% in any given course.

## Bachelor of Science in Education and health sciences with a major in Adolescence to Young Adult Education (EYA) minimum of 124 credit hours

The Department of Teacher Education offers a Bachelor of Science in Education and Health Sciences in Adolescence to Young Adult Education. The program meets all requirements for a state of Ohio license to teach learners ages 12-21 and grades 7-12. A student has three options to meet the program requirements for adolescence to young adult (AYA) licensure: 1) BSE with a major in AYA education; 2) BSE with a major in AYA education and an additional major in the College of Arts and Sciences; 3) BSE with a major in AYA education and a Bachelor of Arts or Bachelor of Science degree in the College of Arts and Sciences (dual degree).

A student in the AYA education program is required to have a single comprehensive teaching field. The number of semester hours to complete the teaching field requirements varies across programs. A student must meet all academic and competency requirements in order to continue in the program, to student teach and be recommended for licensure. In addition, all field and clinical experiences must be successfully completed. Students are expected to have completed all of the teaching concentration courses prior to student teaching; exceptions must be approved by a faculty adviser. In order for the University of Dayton to approve the state of Ohio teaching license application, applicants must have on file in the SEHS dean's office passing scores on the state of Ohio licensure tests.

AYA education teaching fields include the following:

- Integrated Language Arts
- Integrated Mathematics
- Integrated Science
- Integrated Social Studies
- Earth Sciences/Chemistry
- Earth Sciences/Physics
- Earth Sciences
- Life Sciences/Chemistry

- Life Sciences/Earth
- Life Sciences/Physics
- Life Sciences
- Physical Sciences/Chemistry
- Physical Sciences/Physics
- Physical Sciences/Physics & Chemistry

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
HST 103 West and the World	
REL 103 Introduction to Religious and Theological Studies	
PHL 103 Intro To Philosophy	
ENG 100 Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>	0-3
ENG 200 Writing Seminar II	
Oral Communication	3
CMM 100 Principles of Oral Communication	
Mathematics	3
Social Science	3
Arts	3
Natural Sciences <sup>4</sup>	7
Crossing Boundaries	variable credit
Faith Traditions	
Practical Ethical Action	
Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

### Major Requirements

EDT 109	Personal Aspects of Teaching	1
EDT 110	The Profession of Teaching <sup>1</sup>	2
EDT 110L	The Profession of Teaching Laboratory	1
EDT 222	Development in MC & AYA <sup>1</sup>	3
EDT 222L	Development in MC & AYA Laboratory	0
EDT 305	Philosophy & History of American Education (Satisfies CAP Practical Ethical Action and Advanced Study in Philosophy)	3
EDT 338	Teaching, Learning and Management <sup>1</sup>	3
EDT 338L	Teaching, Learning & Management Laboratory	0

EDT 340	Educating Diverse Student Populations in Inclusive Settings (Satisfies CAP Integrative and Diversity and Social Justice) <sup>1</sup>	3
EDT 340L	Educating Diverse Student Populations in Inclusive Settings Laboratory	0
EDT 459	Critical Reading & Writing in the Content Area <sup>2</sup>	3
EDT 436	AYA Capstone Course (Satisfies CAP Capstone)	3
EDT 475	Student Teaching-Adolescent to Young Adult <sup>3</sup>	12
Assessment (EDT 481)		3
EDT Content methods in teaching field <sup>1,3</sup>		3
EDT Content methods laboratory course		1
MTH 114	Contemporary Mathematics (Satisfies CAP Mathematics) <sup>4</sup>	3
Concentration (10 courses)		30
Concentration/elective (6 courses)		18

<sup>1</sup> Must register for the corequisite laboratory course, all field experiences arranged by the University.

<sup>2</sup> EDT 459 and content methods in teaching field must be taken concurrently.

<sup>3</sup> Students will have a required seminar throughout the semester.

<sup>4</sup> Only applicable to language arts and social studies majors.

## Bachelor of Science in Education and Health sciences with a major in Early Childhood Education (ece) minimum of 124 credit hours

The Department of Teacher Education offers a Bachelor of Science in Education and Health Sciences in Early Childhood Education. This program meets all requirements for a state of Ohio license to teach prekindergarten through grade three.

A student in the early childhood education (ECE) program is required to choose an area of focus for elective coursework which must bring the total number of credit hours to 124 required for graduation. A student must meet all academic and competency requirements in order to continue in the program, to student teach and to be recommended for licensure. In addition, all field and clinical experiences must be successfully completed. In order for the University of Dayton to approve the state of Ohio teaching license application, applicants must have on file in the SEHS dean's office passing scores on the state of Ohio licensure tests.

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
HST 103 West and the World	
REL 103 Introduction to Religious and Theological Studies	
PHL 103 Intro To Philosophy	
ENG 100 Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>	0-3
ENG 200 Writing Seminar II	
Oral Communication	3
CMM 100 Principles of Oral Communication	

Mathematics	3
Social Science	3
Arts	3
Natural Sciences <sup>4</sup>	7
Crossing Boundaries	variable credit
Faith Traditions	
Practical Ethical Action	
Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

#### Major Requirements

EDT 109	Personal Aspects of Teaching	1
EDT 110	The Profession of Teaching <sup>3</sup>	2
EDT 110L	The Profession of Teaching Laboratory	1
EDT 211	Child Development: Birth to Age Eight Laboratory <sup>3</sup>	3
EDT 211L	Child Development: Birth to Age 8 Laboratory	0
EDT 212	Early Childhood Theory & Practice <sup>1,3</sup>	3
EDT 212L	Early Childhood Theory & Practice Laboratory	0
EDT 305	Philosophy & History of American Education (Satisfies CAP Practical Ethical Action and Advanced Study in Philosophy)	3
EDT 313	Developmentally Appropriate Practice for Preschool <sup>2,3</sup>	3
EDT 313L	Developmentally Appropriate Practice for Preschool Laboratory	1
EDT 317	Integrating the Arts in Early Childhood Curriculum <sup>2</sup>	2
EDT 340	Educating Diverse Student Populations in Inclusive Settings (Satisfies CAP Integrative and Diversity and Social Justice) <sup>3</sup>	3
EDT 340L	Educating Diverse Student Populations in Inclusive Settings Laboratory	0
EDT 341	Language Development & Emergent Literacy	3
EDT 344	Collaboration with Families, Professionals & Agencies	3
EDT 350	Foundations of Literacy through Literature	3
EDT 412	Developmentally Appropriate Practice in Mathematics for ECE <sup>2</sup>	3
EDT 413	Developmentally Appropriate Practice in Social Studies for ECE <sup>2</sup>	2

EDT 414	Developmentally Appropriate Practice in Science for ECE <sup>2</sup>	3
EDT 415	Working with Young Learners with Mild to Moderate Disabilities <sup>2,3</sup>	2-3
EDT 415L	ECE Primary (K-3) Field Internship <sup>2</sup>	1-2
EDT 416	Early Childhood Capstone Seminar	3
EDT 450	Phonics, Spelling & Vocabulary	3
EDT 453	Introduction to Literacy for Early Childhood	3
EDT 454	Methods of Literacy for Early Childhood <sup>2</sup>	3
EDT 472	Internship in Prekindergarten Special Needs <sup>4</sup>	5
EDT 473	Student Teaching-Primary Grades (Satisfies CAP Capstone) <sup>5</sup>	3-12
GEO 204	Geology for Teachers (Satisfies CAP Natural Sciences)	4
HST 251	American History to 1865 (Satisfies CAP Advanced Study in History)	3
MTH 204	Mathematical Concepts I <sup>6</sup>	3
MTH 205	Mathematical Concepts II (Satisfies CAP Mathematics) <sup>6</sup>	3
MUS 232	Integrating the Arts (Satisfies CAP Arts)	2
SCI 190	The Physical Universe (Satisfies CAP Natural Sciences)	3
SCI 190L	The Physical Universe Laboratory	1
SCI 230	Organisms, Evolution & Environment (Satisfies CAP Inquiry)	3
VAE 101	Early Childhood Art Education	2
Focus area electives (0-4 courses)		Variable credit

<sup>1</sup> Field experiences arranged at the Bombeck Family Learning Center.

<sup>2</sup> Designates cohort courses to be taken together in the same semester.

<sup>3</sup> Must register for the corequisite laboratory course, all field experiences arranged by the University.

<sup>4</sup> Course should only be taken by students pursuing PKSN focus area or ECIS license.

<sup>5</sup> Students pursuing PKSN focus area or ECIS license should take course for 10 semester hours; all other students should take course for 12 semester hours.

<sup>6</sup> MTH 168 can also substitute for MTH 204 and MTH 205.

## Bachelor of Science in Education and health sciences with a major in Early Childhood Leadership and Advocacy (ecI) minimum of 121 credit hours

The Department of Teacher Education offers a Bachelor of Science in Education in Early Childhood Leadership and Advocacy. The early childhood leadership and advocacy (ECLA) program provides knowledge and skills required of program administrators, supervisors, teacher leaders and advocates for effective leadership and advocacy in a variety of early childhood settings. Students will be admitted after earning an associate degree or equivalent in ECE or a related field. Students must complete at least 54 hours from a four-year institution, 30 semester hours

of which must be completed at the University of Dayton, for a minimum of 121 credit hours.

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
HST 103 West and the World	
REL 103 Introduction to Religious and Theological Studies	
PHL 103 Intro To Philosophy	
ENG 100 Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>	0-3
ENG 200 Writing Seminar II	
Oral Communication	3
CMM 100 Principles of Oral Communication	
Mathematics	3
Social Science	3
Arts	3
Natural Sciences <sup>4</sup>	7
Crossing Boundaries	variable credit
Faith Traditions	
Practical Ethical Action	
Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

### Major Requirements

EDT 305	Philosophy & History of American Education	3
EDT 340	Educating Diverse Student Populations in Inclusive Settings	3
EDT 340L	Educating Diverse Student Populations in Inclusive Settings Laboratory	0
EDT 344	Collaboration with Families, Professionals & Agencies	3
EDT 460E	Early Childhood Program & Personnel Management	3
EDT 460EL	Early Childhood Program & Personnel Management Laboratory	0-1
EDT 461E	Supporting Quality Curriculum & Instruction in Early Care & Education	3
EDT 461EL	Supporting Quality Curriculum & Instruction in Early Care & Education Laboratory	0-1

EDT 462E	Regulations, Licensing & the Law in Early Care & Education	3
EDT 462EL	Regulations, Licensing & the Law in Early Care & Education Laboratory	0-1
EDT 463E	Managing Finances & Marketing in Early Care & Education	3
EDT 463EL	Managing Finances & Marketing in Early Care & Education Laboratory	0-1
EDT 464E	Advocacy in Early Care & Education	3
EDT 465E	Internship & Practicum in Early Childhood Administration	6
Workshop		12

## Bachelor of Science in Education and health sciences with a major in Foreign Language Education (ELA) minimum of 124 credit hours

The Department of Teacher Education offers a Bachelor of Science in Education and Health Sciences in Foreign Language Education. The program meets all requirements for a state of Ohio license to teach P-12. Three teaching concentrations are available: French, German and Spanish. Students enrolled in this program may also elect to complete a dual degree or an additional major in the College of Arts and Sciences.

A student must meet all academic and competency requirements in order to continue in the program, to student teach and to be recommended for licensure. In addition, all field and clinical experiences must be successfully completed. Students are expected to have completed all of the teaching concentration courses prior to student teaching; exceptions must be approved by a faculty adviser. In order for the University of Dayton to approve the state of Ohio teaching license application, applicants must have on file in the SEHS dean's office passing scores on the state of Ohio licensure tests, including the Oral Proficiency Interview (OPI) and the Writing Proficiency Test (WPT) offered by the American Council on the Teaching of Foreign Languages (ACTFL).

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
HST 103 West and the World	
REL 103 Introduction to Religious and Theological Studies	
PHL 103 Intro To Philosophy	
ENG 100 Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>	0-3
ENG 200 Writing Seminar II	
Oral Communication	3
CMM 100 Principles of Oral Communication	
Mathematics	3
Social Science	3
Arts	3
Natural Sciences <sup>4</sup>	7
Crossing Boundaries	variable credit
Faith Traditions	



Practical Ethical Action	
Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

- <sup>1</sup> Completed with ASI 110 and ASI 120.
- <sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.
- <sup>3</sup> Completed with ENG 200H or ASI 120.
- <sup>4</sup> Must include two different disciplines and accompanying lab.

### Major Requirements

EDT 109	Personal Aspects of Teaching	1
EDT 110	The Profession of Teaching	2
EDT 110L	The Profession of Teaching Laboratory	1
EDT 207	Child & Adolescent in Education	3
EDT 207L	Child & Adolescent in Education Laboratory	0
EDT 305	Philosophy & History of American Education (Satisfies CAP Practical Ethical Action and Advanced Study in Philosophy)	3
EDT 338	Teaching, Learning and Management	3
EDT 338L	Teaching, Learning & Management Laboratory	0
EDT 340	Educating Diverse Student Populations in Inclusive Settings (Satisfies CAP Integrative and Diversity and Social Justice)	3
EDT 340L	Educating Diverse Student Populations in Inclusive Settings Laboratory	0
EDT 433	Foreign Language Methods for Adolescence to Young Adult	3
EDT 433L	Foreign Language Methods for AYA (7-12) Field Internship	1-2
EDT 436	AYA Capstone Course	3
EDT 471	Student Teaching- Foreign Languages P-12 (Satisfies CAP Capstone)	12
LNG 320	Instructed Second Language Acquisition	2
LNG 330	Teaching World Languages in the Elementary School (PK-6)	4
LNG 468	Introduction to Linguistics	3
MTH 114	Contemporary Mathematics (Satisfies CAP Mathematics)	3
Concentration (12 courses) <sup>2</sup>		36
Concentration/electives (3 courses)		9
Study Abroad (Concentration) <sup>1</sup>		2-14

- <sup>1</sup> Participation in an approved study-abroad immersion program for a summer, semester or academic year is strongly recommended. Experience shows that study abroad is a major factor in the successful completion of the professional requirements which include field experiences and required assessments for licensure.
- <sup>2</sup> One course must be FRN 469, GER 469 or SPN 469.

## Bachelor of Science in Education and health sciences with a major in Intervention Specialist (eis) minimum of 124 credit hours

The Department of Teacher Education offers a Bachelor of Science in Education and Health Sciences in Intervention Specialist Education. The intervention specialist (IS) program meets all requirements for a state of Ohio license to teach learners in kindergarten through grade 12 with mild to moderate educational needs. Students in this program also have an emphasis in inclusive general education.

A student must meet all academic and competency requirements in order to continue in the program, to student teach and to be recommended for licensure. In addition, all field and clinical experiences must be successfully completed. In order for the University of Dayton to approve the state of Ohio teaching license application, applicants must have on file in the SEHS dean's office passing scores on the state of Ohio licensure tests.

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>		12
HST 103	West and the World	
REL 103	Introduction to Religious and Theological Studies	
PHL 103	Intro To Philosophy	
ENG 100	Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>		0-3
ENG 200	Writing Seminar II	
Oral Communication		3
CMM 100	Principles of Oral Communication	
Mathematics		3
Social Science		3
Arts		3
Natural Sciences <sup>4</sup>		7
Crossing Boundaries		variable credit
Faith Traditions		
Practical Ethical Action		
Inquiry		
Integrative		
Advanced Study		variable credit
Philosophy and/or Religious Studies		
Historical Studies		
Diversity and Social Justice		3
Major Capstone		0-3

- <sup>1</sup> Completed with ASI 110 and ASI 120.
- <sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.
- <sup>3</sup> Completed with ENG 200H or ASI 120.
- <sup>4</sup> Must include two different disciplines and accompanying lab.

### Major Requirements

EDT 109	Personal Aspects of Teaching	1
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EDT 110	The Profession of Teaching <sup>1,3</sup>	2
EDT 110L	The Profession of Teaching Laboratory	1
EDT 207	Child & Adolescent in Education <sup>1</sup>	3
EDT 207L	Child & Adolescent in Education Laboratory	0
EDT 305	Philosophy & History of American Education (Satisfies CAP Practical Ethical Action and Advanced Study in Philosophy)	3
EDT 321	Classroom Environment for Middle Childhood <sup>1</sup>	3
EDT 321L	Classroom Environment for Middle Childhood Laboratory	1
EDT 340	Educating Diverse Student Populations in Inclusive Settings (Satisfies CAP Integrative and Diversity and Social Justice) <sup>1</sup>	3
EDT 340L	Educating Diverse Student Populations in Inclusive Settings Laboratory	0
EDT 341	Language Development & Emergent Literacy	3
EDT 342	Behavior Management	3
EDT 343	Introduction to Education of Learners with Mild/Moderate Learning Needs <sup>1</sup>	3
EDT 343L	Introduction to Education of Learners with Mild/Moderate Learning Needs Laboratory	0
EDT 344	Collaboration with Families, Professionals & Agencies	3
EDT 350	Foundations of Literacy through Literature	3
EDT 425	The Middle School Principles & Practices	3
EDT 441	Adapting Content Standards for Students with Special Needs <sup>1</sup>	3
EDT 441L	Adapting Content Standards for Students with Special Needs Laboratory	0
EDT 442	Assessment: Mild/Moderate <sup>1,2</sup>	3
EDT 442L	Intervention Specialist: Mild/Moderate Field Internship <sup>2</sup>	1-2
EDT 443	Curriculum: Mild/Moderate <sup>2</sup>	2
EDT 444	Instructional Strategies: Mild/Moderate <sup>2</sup>	3
EDT 445	Application of Computers/Technology in Special Education	2
EDT 450	Phonics, Spelling & Vocabulary	3
EDT 453	Introduction to Literacy for Early Childhood	3
EDT 454	Methods of Literacy for Early Childhood	3
EDT 476	Student Teaching- Intervention Specialist: Mild/Moderate (Satisfies CAP Capstone)	12
GEO 204	Geology for Teachers (Satisfies CAP Natural Sciences)	4
HST 251	American History to 1865 (Either satisfies CAP Advanced Study in History)	3
or HST 252	American History Since 1865	
MTH 204	Mathematical Concepts I	3
MTH 205	Mathematical Concepts II (Satisfies CAP Mathematics)	3
SCI 190	The Physical Universe (Satisfies CAP Natural Sciences) <sup>4</sup>	3

SCI 230	Organisms, Evolution & Environment (Satisfies CAP Inquiry) <sup>4</sup>	3
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<sup>1</sup> Must register for the corequisite laboratory course, all field experiences arranged by the University.

<sup>2</sup> EDT 442, EDT 442L, EDT 443 & EDT 444 must be taken concurrently. Field experience is required.

<sup>3</sup> Designates cohort courses to be taken together in the same semester.

<sup>4</sup> Students must take either SCI 190L or SCI 230L.

## Bachelor of Science in Education and health sciences with a major in Middle Childhood Education (ems) minimum of 124 credit hours

The Department of Teacher Education offers the middle childhood education (MCE) program, which leads to the Bachelor of Science in Education and Health Sciences. The program meets all requirements for a state of Ohio license to teach grades four through nine. A student in the MCE program is required to have two concentrations of 24 or more semester hours in the following content areas:

- Mathematics
- Science
- Social Studies
- Reading/Language Arts

A student must meet all academic and competency requirements in order to continue in the program, to student teach and to be recommended for licensure. In addition, all field and clinical experiences must be successfully completed. Students are expected to have completed all of the teaching concentration courses prior to student teaching; exceptions must be approved by a faculty adviser. In order for the University of Dayton to approve the state of Ohio teaching license application, applicants must have on file in the SEHS dean's office passing scores on the state of Ohio licensure tests.

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>		12
HST 103	West and the World	
REL 103	Introduction to Religious and Theological Studies	
PHL 103	Intro To Philosophy	
ENG 100	Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>		0-3
ENG 200	Writing Seminar II	
Oral Communication		3
CMM 100	Principles of Oral Communication	
Mathematics		3
Social Science		3
Arts		3
Natural Sciences <sup>4</sup>		7
Crossing Boundaries		variable credit

Faith Traditions	
Practical Ethical Action	
Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

### Major Requirements

EDT 109	Personal Aspects of Teaching	1
EDT 110	The Profession of Teaching <sup>1</sup>	2
EDT 110L	The Profession of Teaching Laboratory	1
EDT 222	Development in MC & AYA <sup>1</sup>	3
EDT 222L	Development in MC & AYA Laboratory	0
EDT 305	Philosophy & History of American Education (Satisfies CAP Practical Ethical Action and Advanced Study in Philosophy)	3
EDT 321	Classroom Environment for Middle Childhood <sup>1,2</sup>	3
EDT 321L	Classroom Environment for Middle Childhood Laboratory	1
EDT 340	Educating Diverse Student Populations in Inclusive Settings (Satisfies CAP Integrative and Diversity and Social Justice) <sup>1,2</sup>	3
EDT 340L	Educating Diverse Student Populations in Inclusive Settings Laboratory	0
EDT 350	Foundations of Literacy through Literature	3
EDT 423	Middle Childhood Capstone Seminar	3
EDT 425	The Middle School Principles & Practices	3
EDT 425L	Middle Childhood Principles & Practices Laboratory	0
EDT 450	Phonics, Spelling & Vocabulary	3
EDT 452	Digital Literacies, ELL & Content Reading Strategies	3
EDT 458	Reading, Writing & Assessment - MC <sup>1,2</sup>	3
EDT 458L	MCE Middle Level (4-9) Field Internship	1-2
EDT 474	Student Teaching- Middle Childhood (Satisfies CAP Capstone)	12
Methods courses (select two):		6
EDT 426	Reading/Language Arts for Middle Childhood	
EDT 427	Mathematics for Middle Childhood	
EDT 428	Science for Middle Childhood	
EDT 429	Social Studies for Middle Childhood	
SCI 190	The Physical Universe (Satisfies CAP Natural Sciences)	3
SCI 190L	The Physical Universe Laboratory	1

Concentration (12 courses) <sup>3</sup>	36
Total Hours	94-95

<sup>1</sup> Must register for the corequisite laboratory course, all field experiences arranged by the University.

<sup>2</sup> Designates cohort courses to be taken together in the same semester.

<sup>3</sup> Fewer concentration hours may be required depending upon chosen concentrations.

## Bachelor of Science in Education and health sciences with a major in Secondary Catholic Religion Education (ERL) minimum of 124 credit hours

The Department of Teacher Education offers the Bachelor of Science in Education and Health Sciences in Secondary Catholic Religion Education. This program leads to the Archdiocese of Cincinnati Certificate to teach religion grades 7-12.

A student must meet all academic and competency requirements in order to continue in the program, to student teach and to be recommended for the certificate. In addition, all field and clinical experiences must be successfully completed. Students should take electives as needed to achieve 124 semester credit hours.

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup> 12

HST 103	West and the World
REL 103	Introduction to Religious and Theological Studies
PHL 103	Intro To Philosophy
ENG 100	Writing Seminar I <sup>2</sup>

Second-Year Writing Seminar <sup>3</sup> 0-3

ENG 200 Writing Seminar II

Oral Communication 3

CMM 100 Principles of Oral Communication

Mathematics 3

Social Science 3

Arts 3

Natural Sciences <sup>4</sup> 7

Crossing Boundaries variable credit

Faith Traditions
Practical Ethical Action
Inquiry
Integrative

Advanced Study variable credit

Philosophy and/or Religious Studies
Historical Studies
Diversity and Social Justice 3
Major Capstone 0-3

- <sup>1</sup> Completed with ASI 110 and ASI 120.
- <sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.
- <sup>3</sup> Completed with ENG 200H or ASI 120.
- <sup>4</sup> Must include two different disciplines and accompanying lab.

### Major Requirements

EDT 109	Personal Aspects of Teaching	1
EDT 110	The Profession of Teaching <sup>1</sup>	2
EDT 110L	The Profession of Teaching Laboratory	1
EDT 222	Development in MC & AYA <sup>1</sup>	3
EDT 222L	Development in MC & AYA Laboratory	0
EDT 305	Philosophy & History of American Education (Satisfies CAP Practical Ethical Action and Advanced Study in Philosophy)	3
EDT 331L	Religion Methods Laboratory	1
EDT 338	Teaching, Learning and Management <sup>1</sup>	3
EDT 338L	Teaching, Learning & Management Laboratory	0
EDT 340	Educating Diverse Student Populations in Inclusive Settings (Satisfies CAP Integrative and Diversity and Social Justice) <sup>1</sup>	3
EDT 340L	Educating Diverse Student Populations in Inclusive Settings Laboratory	0
EDT 436	AYA Capstone Course (Satisfies CAP Capstone)	3
EDT 459	Critical Reading & Writing in the Content Area	3
EDT 475	Student Teaching-Adolescent to Young Adult	12
MTH 114	Contemporary Mathematics (Satisfies CAP Mathematics)	3
Concentration (31 hours)		

- <sup>1</sup> Must register for the corequisite laboratory course, all field experiences arranged by the University.

## Early Childhood Generalist Endorsement

The Department of Teacher Education offers the early childhood generalist endorsement program. The endorsement will allow teachers in self-contained fourth and fifth grade classrooms to teach the subjects of mathematics, science and social studies. Students enrolled in an ECE program may complete the coursework for the early childhood generalist endorsement as a focus area for their undergraduate degree. In order for the University of Dayton to approve the state of Ohio endorsement application, applicants must have on file in the SEHS dean's office passing scores on the state of Ohio licensure tests.

### Early Childhood Generalist Endorsement

EDT 409	Mathematics for 4th & 5th Grades	3
EDT 410	Science for 4th & 5th Grades	3
EDT 411	Social Studies for 4th & 5th Grades	3
Total Hours		9

## PreKindergarten Special Needs Endorsement

The Department of Teacher Education offers the prekindergarten special needs (PKSN) endorsement program. This endorsement can be added to an IS or ECE license and allows teachers to teach children ages

three to five who have mild or moderate to intensive needs. Students enrolled in an ECE program may complete the coursework for the PKSN endorsement as a focus area for their undergraduate degree. In order for the University of Dayton to approve the state of Ohio endorsement application, candidates must have on file in the SEHS dean's office passing scores on the state of Ohio licensure tests.

### Prekindergarten Special Needs Endorsement

EDT 314	Collaborative Assessment & Team Models	3
EDT 315	Health & Medical Issues for Early Childhood	3
EDT 341	Language Development & Emergent Literacy	3
EDT 344	Collaboration with Families, Professionals & Agencies	3
EDT 472	Internship in Prekindergarten Special Needs	5
Total Hours		17

## Middle Childhood Generalist Endorsement

The Department of Teacher Education offers the middle childhood generalist endorsement program. This endorsement can be added to any existing MCE license for any combination of the four areas of concentration. The generalist endorsement will allow teachers to teach grades four to six only. In order for the University of Dayton to approve the state of Ohio endorsement application, candidates must have on file in the SEHS dean's office passing scores on the state of Ohio licensure tests.

### Middle Childhood Generalist Endorsement

<b>Language and Reading</b>		
EDT 426	Reading/Language Arts for Middle Childhood	3
Select one course from		3
EDT 608	The Writing Classroom	
ENG 470	History of English	
ENG 472	The Structure of English	
LNG 468	Introduction to Linguistics	

### Mathematics

EDT 427	Mathematics for Middle Childhood	3
MTH 266	Discrete & Finite Mathematics for Middle School Teachers	3

### Science (Prerequisites: SCI 190, SCI 190L, SCI 210, & SCI 210L))

EDT 428	Science for Middle Childhood	3
SCI 230	Organisms, Evolution & Environment	3
SCI 230L	Organisms, Evolution & Environment Laboratory	1

### Social Studies

EDT 429	Social Studies for Middle Childhood	3
HST 251	American History to 1865	3

## Catholic Education certificate

The Department of Teacher Education offers the undergraduate Catholic education certificate, which is an interdisciplinary program designed for University of Dayton students enrolled in any major. The program includes courses in the departments of Teacher Education and Religious Studies, and prepares students with historical, cultural, catechetical and spiritual background that is particularly relevant for students interested in teaching in Catholic schools or pursuing parish ministry. Embedded within the program are opportunities for preservice teacher education

students to develop competencies and dispositions that are considered desirable by Catholic school administrators, while for others it may provide experience that may help the student to discern a call to a career in Catholic education or in another ecclesial area. It should be noted that the certificate alone does not meet the requirements for teacher licensure in the state of Ohio.

#### Certificate in Catholic Education

EDT 306	History of Catholic K-12 Schools in the United States	3
EDT 336	The Culture of the Catholic School	3
REL 281	Forum for Catechetical Leaders I	1
REL 282	Forum for Catechetical Leaders II	1
REL 283	Forum for Catechetical Leaders III	1
REL 284	Forum for Catechetical Leaders IV	1
Total Hours		10

## Early Childhood Intervention Specialist Certificate

The Department of Teacher Education offers the early childhood intervention specialist (ECIS) certificate program. This certificate, granted through the Ohio Department of Developmental Disabilities, is valid for servicing infants and toddlers, ages birth through two, who have an identified developmental delay or who are at risk for developing such a delay. The young child is served within the context of family. Students enrolled in an ECE program may complete the coursework for the ECIS certificate as a focus area for their undergraduate degree.

#### Early Childhood Intervention Specialist Certificate

EDT 312	Infant & Toddler Practicum Seminar	2
EDT 314	Collaborative Assessment & Team Models	3
EDT 315	Health & Medical Issues for Early Childhood	3
EDT 341	Language Development & Emergent Literacy	3
EDT 344	Collaboration with Families, Professionals & Agencies	3
Total Hours		14

## Early Childhood Leadership and Advocacy Certificate

The Department of Teacher Education offers the early childhood leadership and advocacy (ECLA) certificate program. This certificate provides knowledge and skills required of program administrators, supervisors, teacher leaders and advocates for effective leadership and advocacy in a variety of early childhood settings. Students enrolled in an ECE license program may complete the coursework for the ECLA certificate as a focus area for their undergraduate degree.

#### Early Childhood Leadership and Advocacy Certificate

EDT 460E	Early Childhood Program & Personnel Management	3
EDT 460EL	Early Childhood Program & Personnel Management Laboratory	0-1
EDT 461E	Supporting Quality Curriculum & Instruction in Early Care & Education	3
EDT 461EL	Supporting Quality Curriculum & Instruction in Early Care & Education Laboratory	0-1

EDT 462E	Regulations, Licensing & the Law in Early Care & Education	3
EDT 462EL	Regulations, Licensing & the Law in Early Care & Education Laboratory	0-1
EDT 463E	Managing Finances & Marketing in Early Care & Education	3
EDT 463EL	Managing Finances & Marketing in Early Care & Education Laboratory	0-1
EDT 464E	Advocacy in Early Care & Education	3
EDT 465E	Internship & Practicum in Early Childhood Administration	6
Total Hours		21-25

## Teaching English to speakers of other languages certificate (TESOL)

The Department of Teacher Education offers the undergraduate certificate in teaching English to speakers of other languages (TESOL) program. This program is an interdisciplinary program, drawing from courses in the departments of Teacher Education, English and Global Languages and Cultures. The program is designed for current University of Dayton students enrolled in any major. It prepares students to teach English as an additional language in postsecondary schools, adult education settings and private language institutes in the United States and abroad. It can also provide opportunities for preservice teacher education students to develop competence in working with English-language learners in their grade level and content area classrooms. It should be noted that the certificate alone does not meet the requirements for the TESOL endorsement from the state of Ohio; however, the certificate coursework will apply toward the TESOL endorsement program, which is offered at the post-baccalaureate level.

#### TESOL Certificate

LNG 468 or ENG 468	Introduction to Linguistics	3
ENG 472	The Structure of English	3
EDT 437	Second Language Learning & Teaching	3
ENG 466	TESOL Methods for Teaching English Language Learners	3
EDT 438	TESOL Practicum	1
Total Hours		13

- Bachelor of Science in Education and Health Sciences, Adolescence to Young Adult (p. 349)
- Bachelor of Science in Education (p. 349) and Health Sciences ([https://nextcatalog.udayton.edu/undergraduate/schoolofeducationandhealthsciences/programsofstudy/teachereducation/#ADOL\\_TO\\_YOUNG](https://nextcatalog.udayton.edu/undergraduate/schoolofeducationandhealthsciences/programsofstudy/teachereducation/#ADOL_TO_YOUNG)), Early Childhood Education ([https://nextcatalog.udayton.edu/undergraduate/schoolofeducationandhealthsciences/programsofstudy/teachereducation/#EARLY\\_CHILD](https://nextcatalog.udayton.edu/undergraduate/schoolofeducationandhealthsciences/programsofstudy/teachereducation/#EARLY_CHILD))
- Bachelor of Science in Education (p. 350) and Health Sciences ([https://nextcatalog.udayton.edu/undergraduate/schoolofeducationandhealthsciences/programsofstudy/teachereducation/#ADOL\\_TO\\_YOUNG](https://nextcatalog.udayton.edu/undergraduate/schoolofeducationandhealthsciences/programsofstudy/teachereducation/#ADOL_TO_YOUNG)), Foreign Language (<https://nextcatalog.udayton.edu/undergraduate/>)



schoolofeducationandhealthsciences/programsofstudy/  
teachereducation/#EARLY\_CHILD\_LDR\_AND\_ADV)

- Bachelor of Science in Education (p. 350) and Health Sciences ([https://nextcatalog.udayton.edu/undergraduate/schoolofeducationandhealthsciences/programsofstudy/teachereducation/#ADOL\\_TO\\_YOUNG](https://nextcatalog.udayton.edu/undergraduate/schoolofeducationandhealthsciences/programsofstudy/teachereducation/#ADOL_TO_YOUNG)), Intervention Specialist (<https://nextcatalog.udayton.edu/undergraduate/schoolofeducationandhealthsciences/programsofstudy/teachereducation/#INTERVENTION>)
- Bachelor of Science in Education (p. 350) and Health Sciences ([https://nextcatalog.udayton.edu/undergraduate/schoolofeducationandhealthsciences/programsofstudy/teachereducation/#ADOL\\_TO\\_YOUNG](https://nextcatalog.udayton.edu/undergraduate/schoolofeducationandhealthsciences/programsofstudy/teachereducation/#ADOL_TO_YOUNG)), Middle Childhood Education ([https://nextcatalog.udayton.edu/undergraduate/schoolofeducationandhealthsciences/programsofstudy/teachereducation/#MIDDLE\\_CHILDHOOD](https://nextcatalog.udayton.edu/undergraduate/schoolofeducationandhealthsciences/programsofstudy/teachereducation/#MIDDLE_CHILDHOOD))
- Bachelor of Science in Education (p. 351) and Health Sciences ([https://nextcatalog.udayton.edu/undergraduate/schoolofeducationandhealthsciences/programsofstudy/teachereducation/#ADOL\\_TO\\_YOUNG](https://nextcatalog.udayton.edu/undergraduate/schoolofeducationandhealthsciences/programsofstudy/teachereducation/#ADOL_TO_YOUNG)), Secondary Catholic Religion Education ([https://nextcatalog.udayton.edu/undergraduate/schoolofeducationandhealthsciences/programsofstudy/teachereducation/#SECONDARY\\_CATH](https://nextcatalog.udayton.edu/undergraduate/schoolofeducationandhealthsciences/programsofstudy/teachereducation/#SECONDARY_CATH))

## Adolescence to Young Adult

### First Year

Fall	Hours Spring	Hours
EDT 109	1 EDT 110	2
CMM 100	3 EDT 110L	1
HST 103	3 ENG 100	3
MTH 114	3 REL 103	3
PHL 103	3 CAP Natural Science	3
CAP Natural Science	3 Concentration	3
CAP Natural Science Lab	1	
	<b>17</b>	<b>15</b>

### Second Year

Fall	Hours Spring	Hours
EDT 222	3 CAP Adv Historical Study	3
EDT 222L	0 CAP Inquiry	3
Concentration	12 Concentration	9
CAP Social Science	3 ENG 200	3
	<b>18</b>	<b>18</b>

### Third Year

Fall	Hours Spring	Hours
EDT 338	3 CAP Arts	3
EDT 338L	0 EDT 305	3
EDT 340	3 Concentration	12
EDT 340L	0	
CAP Adv Rel/Faith Traditions	3	
Concentration	6	
	<b>15</b>	<b>18</b>

### Fourth Year

Fall	Hours Spring	Hours
EDT Assessment Course	3 EDT 475	12

EDT 459	3 EDT 436	3
EDT Special Methods	3	
EDT Special Methods Lab	1	
Concentration	6	
	<b>16</b>	<b>15</b>

Total credit hours: 132

## Early Childhood Education

### First Year

Fall	Hours Spring	Hours
EDT 109	1 EDT 110	2
CMM 100	3 EDT 110L	1
HST 103	3 ENG 100	3
MTH 204	3 REL 103	3
PHL 103	3 GEO 204	4
SCI 190	3 MTH 205	3
SCI 190L	1	
	<b>17</b>	<b>16</b>

### Second Year

Fall	Hours Spring	Hours
EDT 211	3 EDT 212	3
EDT 211L	0 EDT 212L	0
MUS 232	2 SCI 230	3
VAE 101	2 Faith Traditions/Adv Religious Studies	3
ENG 200	3 HST 251	3
EDT 340	3 EDT 305	3
EDT 340L	0	
CAP Social Science	3	
	<b>16</b>	<b>15</b>

### Third Year

Fall	Hours Spring	Hours
EDT 341	3 EDT 313	3
EDT 350	3 EDT 313L	1
EDT 344	3 EDT 317	2
EDT 450	3 EDT 453	3
Focus Area	6 Focus Area	9
	<b>18</b>	<b>18</b>

### Fourth Year

Fall	Hours Spring	Hours
EDT 412	3 EDT 473 or 473 <i>and</i> 472	12-15
EDT 413	2	
EDT 414	3	
EDT 415	2-3	
EDT 415L	1-2	
EDT 454	3	
Focus Area	3	
	<b>17-19</b>	<b>12-15</b>

Total credit hours: 129-134

## Foreign Language

### First Year

Fall	Hours Spring	Hours
EDT 109	1 EDT 110	2
CMM 100	3 EDT 110L	1
HST 103	3 ENG 100	3
MTH 114	3 REL 103	3
PHL 103	3 CAP Natural Science	3
Concentration	3 CAP Natural Science Lab	1
	Concentration	3
	<b>16</b>	<b>16</b>

### Second Year

Fall	Hours Spring	Hours
EDT 207	3 EDT 338	3
EDT 207L	0 EDT 338L	0
Adv Rel/Faith Traditions	3 CAP Adv Historial Study	3
CAP Natural Science	3 Concentration	6
CAP Social Science	3 ENG 200	3
Concentration	3 CAP Inquiry	3
	<b>15</b>	<b>18</b>

### Third Year

Fall	Hours Spring	Hours
LNG 468	3 LNG 330	4
Concentration	6 Concentration	12
EDT 340	3	
EDT 340L	0	
LNG 320	2	
CAP Arts	3	
	<b>17</b>	<b>16</b>

### Fourth Year

Fall	Hours Spring	Hours
EDT 305	3 EDT 471	12
EDT 433	3 EDT 436	3
EDT 433L	1-2	
Concentration	9	
	<b>16-17</b>	<b>15</b>

Total credit hours: 129-130

## Intervention Specialist

### First Year

Fall	Hours Spring	Hours
EDT 109	1 EDT 110	2
CMM 100	3 EDT 110L	1
HST 103	3 ENG 100	3
REL 103	3 PHL 103	3
SCI 190	3 GEO 204	4
SCI 190L	1 MTH 205	3
MTH 204	3	
	<b>17</b>	<b>16</b>

### Second Year

Fall	Hours Spring	Hours
EDT 207	3 EDT 305	3
EDT 207L	0 EDT 341	3
SCI 230	3 EDT 343	3
CAP Social Science	3 EDT 343L	0
CAP Adv Rel/Faith Traditions	3 ENG 200	3
HST 251 or 252	3 CAP Arts	3
	<b>15</b>	<b>15</b>

### Third Year

Fall	Hours Spring	Hours
EDT 321	3 EDT 425	3
EDT 321L	1 EDT 441	3
EDT 342	3 EDT 441L	0
EDT 445	2 EDT 450	3
EDT 350	3 EDT 453	3
EDT 340	3 Elective	3
EDT 340L	0	
Elective	3	
	<b>18</b>	<b>15</b>

### Fourth Year

Fall	Hours Spring	Hours
EDT 344	3 EDT 476	12
EDT 442	3	
EDT 442L	1-2	
EDT 443	2	
EDT 444	3	
EDT 454	3	
	<b>15-16</b>	<b>12</b>

Total credit hours: 123-124

## Middle Childhood Education

### First Year

Fall	Hours Spring	Hours
EDT 109	1 EDT 110	2
CMM 100	3 EDT 110L	1
HST 103	3 ENG 100	3
MTH 114 or 207	3 REL 103	3
PHL 103	3 GEO 204	4
SCI 190	3 CAP Arts	3
SCI 190L	1	
	<b>17</b>	<b>16</b>

### Second Year

Fall	Hours Spring	Hours
EDT 222	3 ENG 200	3
EDT 222L	0 Adv Rel/Faith Traditions	3
CAP Adv Historical Study	3 CAP Inquiry	3
CAP Social Science	3 Concentration	9
Concentration	6	
	<b>15</b>	<b>18</b>

**Third Year**

Fall	Hours Spring	Hours
EDT 321	3 EDT 305	3
EDT 321L	1 EDT 425	3
EDT 350	3 EDT 425L	0
EDT 340	3 EDT 450	3
EDT 340L	0 EDT 452	3
Concentration	6 Concentration	6
	<b>16</b>	<b>18</b>

**Fourth Year**

Fall	Hours Spring	Hours
EDT 458	3 EDT 474	12
EDT 458L	1-2 EDT 423	3
EDT 426, 427, 428, or 429	3	
EDT 426, 427, 428, or 429	3	
Concentration	6	
	<b>16-17</b>	<b>15</b>

Total credit hours: 131-132

**Secondary Catholic Religion Education****First Year**

Fall	Hours Spring	Hours
EDT 109	1 EDT 110	2
CMM 100	3 EDT 110L	1
HST 103	3 ENG 100	3
MTH 114 or 207	3 PHL 103	3
REL 103	3 CAP Natural Science	3
CAP Natural Science	3 Adv Historical Study	3
CAP Natural Science Lab	1	
	<b>17</b>	<b>15</b>

**Second Year**

Fall	Hours Spring	Hours
EDT 222	3 CAP Arts	3
EDT 222L	0 REL 281, 282, 283, 284, or UDI 419	1
Adv Rel/Faith Traditions	3 REL 310, 311, or 312	3
REL 281, 282, 283, 284, or UDI 419	1 REL 315, 316, 318, or 319	3
REL 323 or 324	3 REL 443 or 446	3
REL 360 or 363	3 ENG 200	3
CAP Social Science	3	
	<b>16</b>	<b>16</b>

**Third Year**

Fall	Hours Spring	Hours
EDT 338	3 REL 281, 282, 283, 284, or UDI 419	1
EDT 338L	0 undefined	3
EDT 340	3 Religion Elective	3
EDT 340L	0 CAP inquiry	3
EDT 305	3 Elective	6
	<b>9</b>	<b>16</b>

**Fourth Year**

Fall	Hours Spring	Hours
EDT 331L	0-1 EDT 475	12
EDT 459	3 EDT 436	3
Elective	15	
	<b>18-19</b>	<b>15</b>

Total credit hours: 122-123

**Courses****EDT 109. Personal Aspects of Teaching. 1 Hour**

This course is a candidate's general introduction to education as a profession, and to the University of Dayton. Candidates' personal values, goals, motives and strengths will be identified and reflected upon in relation to the qualities and dispositions necessary to be an effective teacher. This course serves as an introduction to the different program areas (AYA, MCE, ECE, IS and multi-age), to technology in education and to various educational issues. EDT 109 is waived for those candidates who transfer to the University.

**EDT 109H. Personal Aspects of Teaching. 1 Hour**

This course is a candidate's general introduction to education as a profession, and to the University of Dayton. Candidates' personal values, goals, motives and strengths will be identified and reflected upon in relation to the qualities and dispositions necessary to be an effective teacher. This course serves as an introduction to the different program areas (AYA, MCE, ECE, IS and multi-age), to technology in education and to various educational issues. EDT 109 is waived for those candidates who transfer to the University.

**EDT 110. The Profession of Teaching. 2 Hours**

This course is designed to study the principal components of effective teaching that facilitate the learning of all students. Current educational issues, the Ohio Standards for the Teaching Profession and other professional standards, developing a community of learners, service learning and teaching incorporating the Marianist traditions are other topics of the course. Prerequisite(s): EDT 109 or by permission. Corequisite(s): EDT 110L.

**EDT 110H. The Profession of Teaching. 2 Hours**

This course is designed to study the principal components of effective teaching that facilitate the learning of all students. Current educational issues, the Ohio Standards for the Teaching Profession and other professional standards, developing a community of learners, service learning and teaching incorporating the Marianist traditions are other topics of the course. Prerequisite(s): EDT 109 or by permission of dean's undergraduate coordinator. Corequisite(s): EDT 110LH.

**EDT 110L. The Profession of Teaching Laboratory. 1 Hour**

This course consists of planned field experiences providing candidates the opportunity for field reflections in school settings. Corequisite(s): EDT 110.

**EDT 110LH. Prfssn Tchng Lab. 1 Hour**

This lab consists of planned field experiences providing candidates the opportunity for field reflections in school settings. Corequisite(s): EDT 110.

**EDT 207. Child & Adolescent in Education. 3 Hours**

Study of the empirical principles of intellectual, moral, physical, personality, and social development as related to performance in the classroom. Interpretations for appropriate generic teaching behaviors and developmental causes of behavior problems are discussed. Prerequisite(s): EDT 110, EDT 110L. Corequisite(s): EDT 207L.

**EDT 207L. Child & Adolescent in Education Laboratory. 0 Hours**

This course consists of planned field experiences providing candidates the opportunity for field reflections in relation to child and adolescent development in school settings. Corequisite(s): EDT 207.

**EDT 211. Child Development: Birth to Age Eight. 3 Hours**

This course focuses on the study of typical physical, motor, social-emotional and aesthetic development of young children ages preconception through eight. Assessment, risk factors, environmental design and guiding behavior are covered. Students will use this knowledge to reflect on and make decisions about practices that serve the needs of young children and their families. This course relies on field experience to be completed at the Bombeck Family Learning Center. Prerequisite(s): EDT 110, EDT 110L. Corequisite(s): EDT 211L.

**EDT 211L. Child Development: Birth to Age 8 Laboratory. 0 Hours**

This 45 contact hour practicum course is one semester of a yearlong field experience held in conjunction with EDT 211 and EDT 212. Only students who have been accepted to the ECE program are eligible. During registration, students should sign up for a weekly time slot at the Bombeck Family Learning Center. Current medical forms with a negative TB test, background check and references are required. Forms are available at the Bombeck Family Learning Center website. Corequisite(s): EDT 211.

**EDT 212. Early Childhood Theory & Practice. 3 Hours**

This course is an introduction to the theory base that drives developmentally appropriate practice for working with young children birth through age eight. It extends knowledge of how children develop and focuses on theories of Piaget, Kohlberg, Skinner, Pavlov, Erikson, Rogers and Vygotsky. Field experience required at the Bombeck Family Learning Center. Prerequisite(s): EDT 110, EDT 110L. Corequisite(s): EDT 212L.

**EDT 212L. Early Childhood Theory & Practice Laboratory. 0 Hours**

This practicum course is a year long field experience held in conjunction with EDT 211 and EDT 212. Only students who have been accepted to the Early Childhood Program are eligible. During registration, students should sign-up for a weekly time slot at the Bombeck Family Learning Center. Current medical forms with a negative TB test, background check, and references are required. Forms are available at the Bombeck Family Learning Center website. Corequisite(s): EDT 212.

**EDT 222. Development in MC & AYA. 3 Hours**

This course is the study of the physical, social, emotional, intellectual and moral characteristics of the developmental period of early adolescence to young adulthood, within the context of human growth and development. The course focuses on changes in the family setting, social and community contexts, threats to health and safety and typical risk behaviors. Prerequisite(s): EDT 110, EDT 110L. Corequisite(s): EDT 222L.

**EDT 222L. Development in MC & AYA Laboratory. 0 Hours**

This course consists of planned field experiences providing candidates the opportunity for field reflections in relation to young adolescent and young adult development in school settings. Corequisite(s): EDT 222.

**EDT 303. School, Self & Society. 3 Hours**

This course is a study of the relationships among institutional reform, personality development and social change in rural, urban and suburban schools to examine the influence of the cultures of communities on their schools. The responses of local schools to national policies will also be included in the course.

**EDT 305. Philosophy & History of American Education. 3 Hours**

This course is the study of American philosophy of education in a historical framework. This course emphasizes the political analyses of educational issues in their historical context. Thematic issues from the Catholic/Marianist perspective are included among the topics studied. Prerequisite(s): EDT 110, EDT 110L, PHL 103.

**EDT 305H. Philosophy & History of American Education. 3 Hours**

This course is the study of American philosophy of education in a historical framework. This course emphasizes the political analyses of educational issues in their historical context. Thematic issues from the Catholic/Marianist perspective are included among the topics studied. Prerequisite(s): EDT 110; PHL 103.

**EDT 306. History of Catholic K-12 Schools in the United States. 3 Hours**

This course examines the Catholic K-12 educational experience in the United States with a particular emphasis on the impact that Catholic schools have had on the creation of Catholic culture in America and on American culture in general. Particular emphasis is placed upon those historical antecedents that directly or indirectly affect Catholic schools today. Prerequisite(s): EDT 110, EDT 110L, HST 103, PHL 103.

**EDT 312. Infant & Toddler Practicum Seminar. 2 Hours**

This guided practicum and seminar will provide an opportunity for candidates to develop and apply their knowledge of typical and atypical development from conception to age three as they observe young children in both structured and naturalistic settings. Developmental milestones as well as related risk factors will be emphasized.

**EDT 313. Developmentally Appropriate Practice for Preschool. 3 Hours**

This course will expand the knowledge of how young children, ages three through five, learn and develop. How to provide opportunities that will support this age group's physical, social, emotional, language, cognitive and aesthetic development will be explored. Extensive focus on the content areas of art, music, science, social studies and mathematics as well as guiding behavior and family culture will occur. Field experience in an urban preschool or preschool special education setting required. Prerequisite(s): EDT 110, EDT 110L, EDT 212, EDT 212L. Corequisite(s): EDT 313L, EDT 453.

**EDT 313L. Developmentally Appropriate Practice for Preschool Laboratory. 1 Hour**

This field experience provides students with an opportunity to work with diverse populations. Placements are made in preschool programs that serve children from low income families, minority children who are at risk or children with identified special needs. Corequisite(s): EDT 313.

**EDT 314. Collaborative Assessment & Team Models. 3 Hours**

This course provides an in depth study of transdisciplinary teaming and collaborative assessment models in the field of early childhood special education. Included will be the transdisciplinary and collaborative nature of assessment in the diagnosis, screening and instruction of young children (birth to age eight) who are typically and atypically developing. Emphasis will be given to the role of the family in the assessment process. Systematic observation using a play-based approach will be emphasized. Prerequisite(s): EDT 110, EDT 110L, EDT 212, EDT 212L.

**EDT 315. Health & Medical Issues for Early Childhood. 3 Hours**

Study of the health and medical needs associated with young children with disabilities. Students engage in collaboration between educational and medical professionals in an effort to integrate services for young children.

**EDT 317. Integrating the Arts in Early Childhood Curriculum. 2 Hours**

This course will provide opportunities for ECE majors to integrate the arts throughout the ECE curriculum in meaningful ways. Music, dance, drama and visual arts will be used to represent what young children know and are able to do as well as provide an opportunity to recognize and appreciate cultural difference in artistic expression. Candidates will create aesthetically pleasing newsletters and websites to communicate with families and to market their program.

**EDT 318. Urban Teacher Academy-Junior Seminar. 0-1 Hours**

This course is designed to deepen understanding of critical issues facing urban educators. Students will examine how the culture of poverty affects students, families and schools. Instructional and management strategies that encourage the learning and development of efficacy, risk-taking, socio-cultural awareness, contextual interpersonal skills and self-understanding are developed through integrated readings, discussions, field experience and presentations. Inherent in this deepening of understanding is the development of reflective thinking and writing and problem solving strategies.

**EDT 321. Classroom Environment for Middle Childhood. 3 Hours**

This course is the study of the middle childhood student within the classroom environment. Theories of learning and practical applications, motivation, classroom management and discipline, lesson and unit planning, teaching methodologies and assessment are examined and practiced. Prerequisite(s): EDT 110, EDT 110L, EDT 222, EDT 222L. Corequisite(s): EDT 321L.

**EDT 321L. Classroom Environment for Middle Childhood Laboratory. 1 Hour**

This course consists of planned field experiences providing candidates the opportunity for field reflections in regards to learning theories and classroom management in middle level school settings. Corequisite(s): EDT 321.

**EDT 322. Perspectives on Education & Social Justice. 3 Hours**

Exploration of research paradigms representing the different disciplines in relation to current educational issues from a social justice perspective. The educational issues will be critically explored from diverse perspectives or domains, and the skills learned will be transferable to the multiple disciplines. The primary student learning outcome (SLO) for the course will be: practical wisdom, as the students will address real problems/issues in P-12 education, drawing upon the knowledge, values and skills embedded within their specific discipline.

**EDT 323. Historical Literacy & Historical Thinking. 3 Hours**

Exploration of the cognitive processes that constitute historical thinking and historical understanding with emphases on the development of historical literacy in the students themselves and strategies designed to increase historical literacy in secondary school students.

**EDT 323H. Historical Literacy & Historical Thinking. 3 Hours**

Exploration of the cognitive processes that constitute historical thinking and historical understanding with an emphasis on the development of historical literacy in the students themselves and strategies designed to increase historical literacy in secondary school students.

**EDT 331L. Religion Methods Laboratory. 0-1 Hours**

This course examines the planning, diagnosis, instructional methods, materials and assessment techniques used in teaching religion to students with varied needs and abilities.

**EDT 336. The Culture of the Catholic School. 3 Hours**

This course explores the theological, moral, academic, human and social components that give the Catholic school its distinctive culture. The role of spiritual, sacramental and communal relationships in the creation of Catholic school identity will be examined. Prerequisite(s): EDT 110, EDT 110L.

**EDT 338. Teaching, Learning and Management. 3 Hours**

This course is a study of the empirical principles of learning such as reinforcement, discovery, motivation and transfer theories. Interpretations for generic teaching behaviors especially in diagnosis, prescription and assessment are presented. Prerequisite(s): EDT 207 and EDT 207L or EDT 222 and EDT 222L. Corequisite(s): EDT 338L.

**EDT 338L. Teaching, Learning & Management Laboratory. 0 Hours**

This course consists of planned field experiences providing candidates the opportunity for field reflections in regard to learning theories in school settings. Corequisite(s): EDT 338.

**EDT 340. Educating Diverse Student Populations in Inclusive Settings. 3 Hours**

The study of the evidence based practice in multicultural education where teachers are knowledgeable about and respect diversity, including cultural and racial/ethnic origins, language, gender, sexual identity, religion, economic status and learning challenges associated with exceptionalities. Candidates will aspire to create democratic classrooms with a culturally relevant and inclusive curriculum, incorporating legal aspects and social justice perspectives associated with student learning. Candidates will gain knowledge in the importance of assessments, and ways to differentiate the curriculum to the individual learning needs of students in general classrooms, working in collaboration with other adults in the student's life. Prerequisite(s): EDT 110, EDT 110L or permission of the department. Corequisite(s): EDT 340L.

**EDT 340H. Educating Diverse Student Populations in Inclusive Settings. 3 Hours**

The study of the evidence based practice in multicultural education where teachers are knowledgeable about and respect diversity, including cultural and racial/ethnic origins, language, gender, sexual identity, religion, economic status, and learning challenges associated with exceptionalities. Candidates will aspire to create democratic classrooms with a culturally relevant and inclusive curriculum, incorporating legal aspects and social justice perspectives associated with student learning. Candidates will gain knowledge in the importance of assessments, and ways to differentiate the curriculum to the individual learning needs of students in general classrooms, working in collaboration with other adults in the student's life. Prerequisite(s): EDT 110, EDT 110L or permission of the department. Corequisite(s): EDT 340LH.

**EDT 340L. Educating Diverse Student Populations in Inclusive Settings Laboratory. 0 Hours**

This lab consists of planned field experiences providing candidates the opportunity for field reflections in relation to adapting learning experiences for diverse learners in school settings. Corequisite(s): EDT 340.

**EDT 340LH. Educating Diverse Student Populations in Inclusive Settings Laboratory. 0 Hours**

This lab consists of planned field experiences providing candidates the opportunity for field reflections in relation to adapting learning experiences for diverse learners in school settings. Corequisite(s): EDT 340H.



**EDT 341. Language Development & Emergent Literacy. 3 Hours**

This course is the study of oral language and literacy development in children, with implications for all learners, including children with special needs. Prerequisite(s): EDT 110, EDT 110L.

**EDT 342. Behavior Management. 3 Hours**

This course examines the principles and methods of observing, recording, measuring and managing human behavior with emphasis on students with disabilities.

**EDT 343. Introduction to Education of Learners with Mild/Moderate Learning Needs. 3 Hours**

This course is a study of the role and function of the intervention specialist. This course presents issues of definition, identification and placement procedures. The candidate will acquire knowledge of major researchers and historians, variations in belief, traditions and values across cultures and current practices in the field. Corequisite(s): EDT 343L.

**EDT 343L. Introduction to Education of Learners with Mild/Moderate Learning Needs Laboratory. 0 Hours**

This course consists of planned field experiences providing candidates the opportunity for field reflections in relation to the individual learning needs of students in school settings. Corequisite(s): EDT 343.

**EDT 344. Collaboration with Families, Professionals & Agencies. 3 Hours**

This course examines theories and techniques to assist teachers in working with colleagues, families and agency personnel to provide an appropriate educational program, improve home-school relationships and develop family-professional partnerships. Historical and legal perspectives of parental influence on special education service are examined. Prerequisite(s): IS: EDT 343, EDT 343L; ECE: EDT 340, EDT 340L.

**EDT 350. Foundations of Literacy through Literature. 3 Hours**

This course serves as an introductory course to the reading/language arts (listening, speaking, reading, writing, viewing, visual representation) and the role literature plays in these processes. It is a foundation course in reading and is intended to align with the requirements of Ohio Reading Core licensure standards for the ECE, MCE, and IS programs. Topics examined include the foundations of literacy, research, theories and related models of reading, various children's and young adult literature, the integration of technology in literacy, an overview of the importance of on-going assessment in teaching reading/language arts and an awareness of cultural, linguistic and ethnic diversity in individual learners. Prerequisite(s): EDT 110, EDT 110L.

**EDT 400. Independent Study. 1-12 Hours**

This course is an in-depth study of a selected educational topic. The candidate develops an individual learning plan that includes objectives, schedule of readings and assignments, products and methods of assessment. Prerequisite(s): Permission of department chairperson.

**EDT 404. Current Innovations in Education. 3 Hours**

This course is the study of current innovations in education. The course focuses on the examination and critical analysis of recent trends in curriculum and instructional and assessment strategies in P-12 schools.

**EDT 406. Special Topics in Teaching. 1-3 Hours**

This course is the study of specialized areas of education not typically included in the professional education sequence. Topics are announced.

**EDT 409. Mathematics for 4th & 5th Grades. 3 Hours**

Planning, diagnosis, instructional methods, materials, assessment and evaluation techniques for teaching mathematics to students in grades four and five with varied needs and abilities using a tier method. Topics include: Ohio Academic Content Standards, applications and instructional techniques that address proficiency testing, resources, technologies, manipulatives, interdisciplinary connections, grouping techniques, current research and 21st century skills. Prerequisite(s): MTH 204, MTH 205.

**EDT 410. Science for 4th & 5th Grades. 3 Hours**

Planning, diagnosis, instructional methods, materials, assessment and evaluation techniques for teaching science to students in grades four and five with varied needs and abilities using a tier method. Topics include: Ohio Academic Content Standards, applications and instructional techniques that address proficiency testing, resources, technologies, manipulatives, interdisciplinary connections, grouping techniques, current research and 21st century skills.

**EDT 411. Social Studies for 4th & 5th Grades. 3 Hours**

Course designed to address social studies content including social aspects of learning and pedagogy specific to fourth and fifth grades.

**EDT 412. Developmentally Appropriate Practice in Mathematics for ECE. 3 Hours**

This course will extend the candidate's knowledge of how children, ages six through eight, develop and learn in order to provide opportunities that support the physical, social, emotional, language, cognitive and aesthetic development of all young children. Students will learn to use knowledge of how young children differ in their development and approaches to learning mathematics in order to provide individually appropriate opportunities for learning the subject. The course will emphasize teaching in the content of mathematics and will focus on the Ohio Mathematics academic content standards and the National Council of Teachers of Mathematics (NCTM) standards. Field experience is integrated with the primary block. This course is part of the first semester senior year internship and culminates in the second semester of student teaching. Prerequisite(s): EDT 313, EDT 313L, EDT 453. Corequisite(s): EDT 413, EDT 414, EDT 415, EDT 415L, EDT 454.

**EDT 413. Developmentally Appropriate Practice in Social Studies for ECE. 2 Hours**

Students will learn to use knowledge of how young children, ages six through eight, differ in their development and approaches to learning social studies in order to provide individually appropriate opportunities for learning the subject. The course will emphasize teaching in the content of social studies and will focus on the Ohio Social Studies academic content standards and the National Council for the Social Studies (NCSS) standards. Field experience is integrated with the primary block. This course is part of the first semester senior year internship and culminates in second semester student teaching. Prerequisite(s): EDT 313, EDT 313L, EDT 453. Corequisite(s): EDT 412, EDT 414, EDT 415, EDT 415L, EDT 454.

**EDT 414. Developmentally Appropriate Practice in Science for ECE. 3 Hours**

This course will explore resources and techniques available to provide all early childhood students with a holistic, interdisciplinary understanding of science. Candidates will design lessons, activities and assessments which link the national standards, state model, and international goals to contemporary events and children's daily lives. Field experience is integrated with the primary block. Developmentally appropriate practices, science processes, inquiry, problem-solving and safety issues will be addressed. Prerequisite(s): EDT 313, EDT 313L, EDT 453, GEO 204; SCI 190, SCI 190L, SCI 230. Corequisite(s): EDT 412, EDT 413, EDT 415, EDT 415L, EDT 454.

**EDT 415. Working with Young Learners with Mild to Moderate Disabilities. 2-3 Hours**

This course is the study of the role and function of the early childhood educator in working with learners with mild to moderate disabilities. The course presents issues of definition, identification and placement procedures. The candidate will acquire knowledge of major researchers and historians, variations in belief, traditions and values across cultures and current practices in the field. Field experience is integrated with the primary block. Prerequisite(s): EDT 313, EDT 313L, EDT 453. Corequisite(s): EDT 412, EDT 413, EDT 414, EDT 415L, EDT 454.

**EDT 415L. ECE Primary (K-3) Field Internship. 1-2 Hours**

This ECE field experience is the first semester of the senior level internship, which provides the candidate the opportunity for practice and reflection in K-3 settings. Corequisite(s): EDT 412, EDT 413, EDT 414, EDT 415, EDT 454.

**EDT 416. Early Childhood Capstone Seminar. 3 Hours**

The exploration of different aspects of the teaching profession through the application of knowledge and skills. Three student learning outcomes are assessed through the capstone course; scholarship, vocation, and practical wisdom. Successful completion of the capstone course includes the submission of a teacher performance assessment and a summative teaching assessment. Pre-requisite(s): EDT 412, EDT 413, EDT 414, EDT 415, EDT 454. Co-requisite(s): EDT 473.

**EDT 418. Urban Teacher Academy- Senior Seminar. 0-1 Hours**

This course is designed to deepen understanding of critical issues facing urban educators. Students will examine how the culture of poverty affects students, families and schools. Instructional and management strategies that encourage the learning and development of efficacy, risk-taking, socio-cultural awareness, contextual interpersonal skills and self-understanding are developed through integrated readings, discussions, field experience and presentations. Inherent in this deepening of understanding is the development of reflective thinking and writing and problem solving strategies.

**EDT 419. Kindergarten-Primary Curriculum & Instruction. 3 Hours**

This course focuses on planning, assessment, instructional methods, materials and evaluation techniques for teaching children in kindergarten and primary grades. Integrated curriculum and the Ohio Early Learning/Academic Content Standards in mathematics and science will be emphasized. Prerequisite(s): EDT 110, EDT 110L, EDT 211, EDT 211L, EDT 212, EDT 212L. Corequisite(s): EDT 419L.

**EDT 419L. Kindergarten-Primary Curriculum & Instruction Laboratory. 0 Hours**

This 20 contact hour course in a kindergarten or primary grades classroom supports the material covered in EDT 419. Corequisite(s): EDT 419.

**EDT 423. MC Capstone Seminar. 3 Hours**

This capstone seminar focuses on the scholarship and practical wisdom needed for mastery of instructional planning, incorporation of developmental appropriate strategies, along with assessment and evaluation techniques where student learning is the focus for teaching all students in the middle level classrooms. The vocational tools of research and theories of learning, unit planning, teaching methodologies and assessment are practiced and mastered through the completion of a teacher performance assessment. Field experience: Full time clinical experience in a middle level classroom. Pre-requisite(s): EDT 222, 321, 425, Content Methods courses. Co-requisite(s): EDT 474.

**EDT 425. The Middle School Principles & Practices. 3 Hours**

This course is primarily a study of organization (school structure), philosophy and curriculum of middle level education (ages 9 to 14), grades four to nine. It is designed to present the theoretical knowledge base about middle level (school) education. Issues and concerns, current trends and the essential elements relating to middle level education will be discussed throughout the semester of study. A variety of inquiry methods will be modeled that encourage critical thinking skills. Prerequisite(s): EDT 222, EDT 222L, EDT 321, EDT 321L. Corequisite(s): MCE: EDT 425L.

**EDT 425L. Middle Childhood Principles & Practices Laboratory. 0 Hours**

This lab consists of planned field experiences providing candidates the opportunity for field reflections in regards to the study of organization (school structure), philosophy and curriculum of middle level education (ages nine to 14), grades four to nine. It is designed to support the course study of the theoretical knowledge base about middle level (school) education. Issues and concerns, current trends and the essential elements relating to middle level education will be observed and studied throughout the semester. Corequisite(s): EDT 425.

**EDT 426. Reading/Language Arts for Middle Childhood. 3 Hours**

This course focuses on the planning, diagnosis, instructional methods, materials, assessment and evaluation techniques for teaching reading/language arts to students in the middle schools with varied needs and abilities. The topics emphasized in this course include: an understanding of Ohio's academic content standards for grades four to nine, applications and instructional techniques that address the Ohio achievement tests, various resources, technologies, interdisciplinary connections, various grouping techniques and current research. Prerequisite(s): EDT 321, EDT 321L, EDT 425, EDT 425L. Corequisite(s): EDT 458, EDT 458L; an additional MCE content methods course.

**EDT 427. Mathematics for Middle Childhood. 3 Hours**

This course focuses on the planning, diagnosis, instructional methods, materials, assessment and evaluation techniques for teaching mathematics to students in the middle schools with varied needs and abilities. The topics emphasized in this course include: an understanding of Ohio's academic content standards for grades four to nine, applications and instructional techniques that address the Ohio achievement tests, various resources, technologies, manipulatives, and other visuals, interdisciplinary connections, various grouping techniques and current research. Prerequisite(s): EDT 321, EDT 321L, EDT 425, EDT 425L. Corequisite(s): EDT 458, EDT 458L; an additional MCE content methods course.

**EDT 428. Science for Middle Childhood. 3 Hours**

This course focuses on the planning, diagnosis, instructional methods, materials, assessment and evaluation techniques for teaching science to students in the middle schools with varied needs and abilities. The topics emphasized in this course include: an understanding of Ohio's academic content standards for grades four to nine, applications and instructional techniques that address the Ohio achievement tests, various resources, technologies, experiments, and other hands-on experiences, interdisciplinary connections, various grouping techniques and current research. Prerequisite(s): EDT 321, EDT 321L, EDT 425, EDT 425L. Corequisite(s): EDT 458, EDT 458L; an additional MCE content methods course.

**EDT 429. Social Studies for Middle Childhood. 3 Hours**

This course focuses on the planning, diagnosis, instructional methods, materials, assessment and evaluation techniques for teaching social studies to students in the middle schools with varied needs and abilities. The topics emphasized in this course include: an understanding of Ohio's academic content standards for grades four to nine, applications and instructional techniques that address the Ohio achievement tests, various resources, technologies and active hands-on experiences, other visuals, interdisciplinary connections, various grouping techniques and current research. Prerequisite(s): EDT 321, EDT 321L, EDT 425, EDT 425L. Corequisite(s): EDT 458, EDT 458L; an additional MCE content methods course.

**EDT 431. Integrated Language Arts Methods for Adolescence to Young Adult. 3 Hours**

This course focuses on planning, diagnosis, instructional methods, materials, assessment and evaluation techniques for teaching all levels of integrated language arts to students in grades seven to 12 with varied needs and abilities. Topics include: understanding Ohio's academic content standards for grades seven to 12, applications and instructional techniques that address the Ohio achievement and competency tests, various resources, technologies, interdisciplinary connections, various grouping techniques, best practices and current research. Prerequisite(s): EDT 222, EDT 222L, EDT 338, EDT 338L, EDT 340, EDT 340L. Corequisite(s): EDT 431L, EDT 459.

**EDT 431L. Integrated Language Arts Methods AYA (7-12) Field Internship. 1-2 Hours**

This AYA field experience is the first semester of the senior level internship, providing the candidate with practice and reflection in the integrated language arts in an AYA setting. Corequisite(s): EDT 431, EDT 459.

**EDT 432. Mathematics Methods for Adolescence to Young Adult. 3 Hours**

This course focuses on planning, diagnosis, instructional methods, materials, assessment and evaluation techniques for teaching all levels of mathematics to students in grades seven to 12 with varied needs and abilities. Topics include: understanding Ohio's academic content standards for grades seven to 12, applications and instructional techniques that address the Ohio achievement and competency tests, various resources, technologies, manipulatives, and other visuals, interdisciplinary connections, various grouping techniques, best practices and current research. Prerequisite(s): EDT 222, EDT 222L, EDT 338, EDT 338L, EDT 340, EDT 340L. Corequisite(s): EDT 432L, EDT 459.

**EDT 432L. Mathematics Methods AYA (7-12) Field Internship. 1-2 Hours**

This AYA field experience is the first semester of the senior level internship, providing the candidate with practice and reflection in a mathematics AYA setting. Corequisite(s): EDT 432, EDT 459.

**EDT 433. Foreign Language Methods for Adolescence to Young Adult. 3 Hours**

This course focuses on planning, diagnosis, instructional methods, materials, assessment and evaluation techniques for teaching all levels of foreign language to students in grades seven to 12 with varied needs and abilities. Topics include: understanding Ohio's academic content standards for grades seven to 12, applications and instructional techniques that address the Ohio achievement and competency tests, various resources, technologies, hands-on activities and other visuals, interdisciplinary connections, various grouping techniques, best practices and current research. Prerequisite(s): EDT 207, EDT 207L, EDT 338, EDT 338L, EDT 340, EDT 340L. Corequisite(s): EDT 433L.

**EDT 433L. Foreign Language Methods for AYA (7-12) Field Internship. 1-2 Hours**

This AYA field experience is the first semester of the senior level internship, which provides the candidate with practice and reflection in a foreign language, AYA setting. Corequisite(s): EDT 305, EDT 433, EDT 459.

**EDT 434. Science Methods for Adolescence to Young Adult. 3 Hours**

This course focuses on planning, diagnosis, instructional methods, materials, assessment and evaluation techniques for teaching all levels of science to students in grades seven to 12 with varied needs and abilities. Topics include: understanding Ohio's academic content standards for grades seven to 12, applications and instructional techniques that address the Ohio achievement and competency tests, various resources, technologies, hands-on activities, interdisciplinary connections, various grouping techniques, best practices and current research. Prerequisite(s): EDT 222, EDT 222L, EDT 338, EDT 338L, EDT 340, EDT 340L. Corequisite(s): EDT 434L, EDT 459.

**EDT 434L. Science Methods for AYA (7-12) Field Internship. 1-2 Hours**

This AYA field experience is the first semester of the senior level internship, which provides the candidate with practice and reflection in a science AYA setting. Corequisite(s): EDT 434, EDT 459.

**EDT 435. Integrated Social Studies Methods for Adolescence to Young Adult. 3 Hours**

This course focuses on planning, diagnosis, instructional methods, materials, assessment and evaluation techniques for teaching all levels of integrated social studies to students in grades seven to 12 with varied needs and abilities. Topics include: understanding Ohio's academic content standards for grades seven to 12, applications and instructional techniques that address the Ohio achievement and competency tests, various resources, technologies, hands-on activities, interdisciplinary connections, various grouping techniques, best practices and current research. Prerequisite(s): EDT 222, EDT 222L, EDT 338, EDT 338L, EDT 340, EDT 340L. Corequisite(s): EDT 435L, EDT 459.

**EDT 435L. Integrated Social Studies Methods for AYA (7-12) Field Internship. 1-2 Hours**

This AYA field experience is the first semester of the senior level internship, which provides the candidate with practice and reflection in a social studies AYA setting. Corequisite(s): EDT 435, EDT 459.

**EDT 436. AYA Capstone Course. 3 Hours**

This course will serve as a culminating course to the AYA senior block experience. The course was designed by AYA faculty to meet the needs of AYA preservice teachers and the other requirements of edTPA. Specifically, the course will include educational research, content area research, data collection analysis and classroom management, real classroom issues and the integration of all these elements to measure and improve student achievement. Corequisite(s): EDT 475.

**EDT 437. Second Language Learning & Teaching. 3 Hours**

This course provides opportunities to explore the nature of language proficiency, second language acquisition, second language literacy, bilingualism and biliteracy, the role of culture in language learning and implications for second language teaching.

**EDT 438. TESOL Practicum. 1 Hour**

This course provides opportunities to practice planning, instruction and assessment in an ESOL classroom under the mentorship of an experienced ESOL teacher. Prerequisite(s): EDT 437, LNG 468, ENG 472, ENG 466.

**EDT 441. Adapting Content Standards for Students with Special Needs. 3 Hours**

This course focuses on the planning, diagnosis, instructional methods, materials, assessment and evaluation techniques used by intervention specialists in inclusive and more restrictive settings to address K-12 content area standards. The topics emphasized include an understanding of how to align Ohio's academic content standards with applications and instructional techniques that ensure the achievement of special education students in the general education curriculum. The course examines the role of the intervention specialist in collaboration with general educators in making appropriate accommodations and modifications. Prerequisite(s): EDT 343, EDT 343L. Corequisite(s): EDT 441L.

**EDT 441L. Adapting Content Standards for Students with Special Needs Laboratory. 0 Hours**

This lab focuses on the planning, diagnosis, instructional methods, materials, assessment and evaluation techniques used by intervention specialists in inclusive and more restrictive settings to address K-12 content area standards. IS students will work with licensed educators to develop an understanding of how to align Ohio's academic content standards with applications and instructional techniques that ensure the achievement of special education students in the general education curriculum. The course emphasizes the role of the intervention specialist in collaboration with general educators in making appropriate accommodations and modifications. Corequisite(s): EDT 441.

**EDT 442. Assessment: Mild/Moderate. 3 Hours**

This course is the study of the multidisciplinary use of assessment instruments and techniques in the diagnosis, planning and evaluation of the special needs learner and the development of individual education programs. Prerequisite(s): EDT 321, EDT 321L, EDT 340, EDT 340L, EDT 343, EDT 343L, EDT 425. Corequisite(s): EDT 442L, EDT 443, EDT 444.

**EDT 442L. Intervention Specialist: Mild/Moderate Field Internship. 1-2 Hours**

This field experience is the first semester of the senior level internship, providing the candidate with practice and reflection in mild/moderate intervention specialist settings. Corequisite(s): EDT 442, EDT 443, EDT 444.

**EDT 443. Curriculum: Mild/Moderate. 2 Hours**

This course is the study of curriculum development considering the motor, cognitive, academic, social, language, affective, functional, life skills and individual programming of students with mild/moderate disabilities. Field experience required. Prerequisite(s): EDT 321, EDT 321L, EDT 340, EDT 340L, EDT 343, EDT 343L, EDT 425. Corequisite(s): EDT 442, EDT 442L, EDT 444.

**EDT 444. Instructional Strategies: Mild/Moderate. 3 Hours**

This course examines the strategies, materials and evaluation techniques for teaching students with mild/moderate learning problems. Field experience required. Prerequisite(s): EDT 321, EDT 321L, EDT 340, EDT 340L, EDT 343, EDT 343L, EDT 425. Corequisite(s): EDT 442, EDT 442L, EDT 443.

**EDT 445. Application of Computers/Technology in Special Education. 2 Hours**

This course is the study of basic computer applications in special education, including instructional programs, software evaluation, telecommunications, multimedia and hypermedia, assistive technology, augmentative devices, resources and legal/ethical issues. Prerequisite(s): EDT 341, EDT 343, EDT 343L.

**EDT 446. Career Education/Special Education. 2 Hours**

Theory and techniques of job classification, assessment, selection, placement and activities related to work from preschool to adult. Prerequisite(s): EDT 343, EDT 343L. Corequisite(s): EDT 442, EDT 442L, EDT 443, EDT 444.

**EDT 447. Instructional Strategies: Moderate. 2 Hours**

This course examines strategies for teaching and managing behaviors of students with moderate disabilities. Prerequisite(s): EDT 321, EDT 321L, EDT 340, EDT 340L, EDT 343, EDT 343L, EDT 425, EDT 425L. Corequisite(s): EDT 442, EDT 442L, EDT 443, EDT 444.

**EDT 450. Phonics, Spelling & Vocabulary. 3 Hours**

This course provides the background knowledge necessary for effectively teaching and assessing the role of phonics in the reading process. Emphases are on developing phonemic awareness, phonics, spelling and word recognition/word meaning embedded in the context of a total reading/language arts program focused on meaning construction.

**EDT 452. Digital Literacies, ELL & Content Reading Strategies. 3 Hours**

In this course, MCE candidates examine the strategies and techniques in the development of prior knowledge skills, study skills, vocabulary, technology and assessment as they relate to critical reading abilities in a variety of curriculum areas.

**EDT 453. Introduction to Literacy for Early Childhood. 3 Hours**

Study of appropriate instruction and assessment supporting the literacy development of children grades P-3. Major emphases are on developing the knowledge base related to a comprehensive framework for literacy instruction, including reading, writing and content area literacy, with a focus on instruction supporting emerging and early readers and writers.

**EDT 454. Methods of Literacy for Early Childhood. 3 Hours**

The continued study of appropriate instruction and assessment supporting the literacy development of children grades P-3, with a focus on instruction supporting developing and transitional readers and writers. Major emphases are on the classroom application of the principles of comprehensive literacy instruction and assessment, including the writing process and comprehension strategies across the content areas. Prerequisite(s): EDT 350, EDT 453. Corequisite(s): ECE: EDT 412, EDT 413, EDT 414, EDT 415, EDT 415L.

**EDT 458. Reading, Writing & Assessment - MC. 3 Hours**

An integrated language arts course focusing on the knowledge base underpinning the teaching of reading and related language arts processes within the language arts and across the curriculum to students of various ages, needs and abilities. Topics include planning, instructional methods, materials, assessment and evaluation techniques. Prerequisite(s): EDT 350. Corequisite(s): EDT 458L; two content methods courses.

**EDT 458L. MCE Middle Level (4-9) Field Internship. 1-2 Hours**

This MCE field experience is the first semester of the senior level internship, which provides the candidate with practice and reflection in middle level school settings. Corequisite(s): EDT 458; two content methods courses.



**EDT 459. Critical Reading & Writing in the Content Area. 3 Hours**

This class focuses on the teaching of reading and writing in the AYA and multi-age content area that includes instruction in organizing instruction, use of protocols for oral language development, strategies for word skill development, strategies for reading comprehension and assessment strategies for instructional purposes for the multi-age and AYA licenses. Prerequisite(s): EDT 110, EDT 110L, EDT 222, EDT 222L, EDT 338, EDT 338L. Corequisite(s): One of the following sets: EDT 431 and EDT 431L, EDT 432 and EDT 432L, EDT 434 and EDT 434L, EDT 435 and EDT 435L.

**EDT 460E. Early Childhood Program & Personnel Management. 3 Hours**

This course is the first in the early childhood leadership program. Students will explore program and personnel management and human relations in early care and education. Corequisite(s): EDT 460EL.

**EDT 460EL. Early Childhood Program & Personnel Management Laboratory. 0-1 Hours**

This lab consists of planned field experiences providing candidates the opportunity for field reflections in relation to program and personnel management and human relations in early care and education. Corequisite(s): EDT 460E.

**EDT 461E. Supporting Quality Curriculum & Instruction in Early Care & Education. 3 Hours**

This course provides opportunities for students to use research to identify and support quality early childhood curriculum, instruction and assessment. Corequisite(s): EDT 461EL.

**EDT 461EL. Supporting Quality Curriculum & Instruction in Early Care & Education Laboratory. 0-1 Hours**

This course consists of planned field experiences providing candidates the opportunity for field reflections in relation to using research to identify and support quality early childhood curriculum, instruction and assessment. Corequisite(s): EDT 461E.

**EDT 462E. Regulations, Licensing & the Law in Early Care & Education. 3 Hours**

This course addresses ethics in early care and education as well as issues related to health, safety and nutrition regulations including first aid, communicable disease, safety policies and practices. Reporting and recognizing child abuse is addressed. Students will learn to respond to regulations, licensing and laws that impact programs for young children. Corequisite(s): EDT 462EL.

**EDT 462EL. Regulations, Licensing & the Law in Early Care & Education Laboratory. 0-1 Hours**

This lab consists of planned field experiences providing candidates the opportunity for field reflections in relation to regulations, licensing and laws that impact programs for young children. Corequisite(s): EDT 462E.

**EDT 463E. Managing Finances & Marketing in Early Care & Education. 3 Hours**

Students will explore strategies for managing finances and developing marketing plans in the field of early care and education. Prerequisite(s): EDT 460E, EDT 460EL. Corequisite(s): EDT 463EL.

**EDT 463EL. Managing Finances & Marketing in Early Care & Education Laboratory. 0-1 Hours**

This course supports students in EDT 463E as they explore managing finances and developing marketing plans in the field of early care and education.

**EDT 464E. Advocacy in Early Care & Education. 3 Hours**

This course explores current political, educational and societal issues related to early care and education and examines how teachers develop leadership skills to become better advocates for children, families and the profession. Prerequisite(s): EDT 460E, EDT 460EL.

**EDT 465E. Internship & Practicum in Early Childhood Administration. 6 Hours**

This internship serves as the culminating experience where students demonstrate the knowledge, skills and dispositions addressed in the four preceding early childhood leadership courses. Students complete a six week full time internship working with/as an early childhood director or administrator. Prerequisite(s): EDT 460E, EDT 460EL.

**EDT 471. Student Teaching- Foreign Languages P-12. 12 Hours**

Full-time supervised and evaluated teaching of foreign languages in P-12 classes. The candidate will demonstrate the knowledge, skills and dispositions required of a beginning foreign language teacher. Attendance at weekly seminars is required. Prerequisite(s): EDT 433; formal admission to student teaching a full semester in advance; completion of 80% of the content area courses.

**EDT 472. Internship in Prekindergarten Special Needs. 5 Hours**

Supervised and evaluated teaching in a preschool special education setting. Candidates are to demonstrate the knowledge, skills, attitudes and dispositions needed to comply with the National Association for the Education of Young Children (NAEYC) and the Division for Early Childhood of the Council of Exceptional Children (DEC) guidelines for appropriate practice that are specific to prekindergarten age children with special needs. Field experience required. Prerequisite(s): EDT 314, EDT 315, EDT 344, EDT 415, EDT 415L; Students must register for the course and submit a student teaching/internship application packet to the department of teacher education by the deadline in January prior to the fall methods block.

**EDT 473. Student Teaching-Primary Grades. 3-12 Hours**

The student teaching experience is a full-time, evaluated experience in a primary setting. The candidate will demonstrate the knowledge, skills and dispositions required of a beginning primary grade teacher. Prerequisite(s): Formal admission to student teaching a full semester in advance. Corequisite(s): EDT 416.

**EDT 474. Student Teaching- Middle Childhood. 12 Hours**

Full-time supervised and evaluated teaching in grades four through nine in at least one of the two candidate's concentration subjects. The candidate will demonstrate the knowledge, skills and dispositions required of a beginning middle level teacher. Attendance at weekly seminars is required. Prerequisite(s): Two of the following: EDT 426, EDT 427, EDT 428, EDT 429; formal admission to student teaching a full semester in advance. Corequisite(s): EDT 423.

**EDT 475. Student Teaching-Adolescent to Young Adult. 12 Hours**

Full-time supervised and evaluated teaching in the content area in a junior or senior high school classroom. The candidate will demonstrate the knowledge, skills and dispositions required of a beginning secondary teacher. Attendance at weekly seminars is required. Prerequisite(s): Formal admission to student teaching a full semester in advance; completion of 80% of the content area courses. Corequisite(s): EDT 436.



**EDT 476. Student Teaching- Intervention Specialist: Mild/Moderate.****12 Hours**

Full-time supervised and evaluated teaching with students demonstrating mild/moderate learning needs. The candidate will demonstrate the knowledge, skills and dispositions of a beginning mild/moderate intervention specialist teacher. Attendance at seminars is required.

Prerequisite(s): EDT 342, EDT 343, EDT 343L, EDT 344, EDT 442, EDT 442L, EDT 443, EDT 444, EDT 445; formal admission to student teaching a full semester in advance.

**EDT 477. Student Teaching- Art P-12. 12 Hours**

Full-time supervised and evaluated teaching in art classes in schools (P-12). The candidate will demonstrate the knowledge, skills and dispositions required of a beginning art teacher. Attendance at a weekly seminar is required. Prerequisite(s): VAE 231, VAE 383, VAE 483; formal admission to student teaching a full semester in advance and the methods courses.

**EDT 479. Student Teaching- Music K-12. 12 Hours**

Full-time supervised and evaluated teaching in music classes in schools (P-12). The candidate will demonstrate the knowledge, skills and dispositions required of a beginning music teacher. Attendance at a weekly seminar is required. Prerequisite(s): MUS 331, MUS 332, MUS 335; formal admission to student teaching a full semester in advance; piano proficiency and completion of junior/senior recital.

**EDT 481. Assessment. 3 Hours**

Student performance assessment is one of the most challenging tasks teachers must create. To do so effectively, teachers must know their state standards, learning goals, and lesson objectives and how they can be measured. The course objectives are aimed at using assessment tools to improve student learning and how the teacher can frame instruction to meet the needs of a diverse group of students. The course will introduce how to analyze data results and communicate assessment results to students, parents, and the school. These objectives will be met by readings, activities, assignments, discussions, lectures, and demonstrations.

**EDT 486. Comparative Study-Public Education. 3 Hours**

This course is designed to study the background and development of education as compared to educational systems in other countries. The organizing themes are how social, political and cultural foundations shape schools. Comparisons across countries and cultures will provide a context to understand how educational practices are shaped by culture.

**EDT 498H. Honors Thesis. 3 Hours**

This course is based on the selection, design, investigation and completion of an independent, original research thesis under the guidance of a faculty research director. Restricted to juniors in the University Honors or Berry Scholars programs. Prerequisite(s): Permission of program director and department chairperson .

**EDT 499H. Honors Thesis. 3 Hours**

This course is based on the selection, design, investigation and completion of an independent, original research thesis under the guidance of a faculty research director. Restricted to seniors in the University Honors or Berry Scholars programs. Prerequisite(s): Permission of the program director and department chairperson.

# School of Engineering

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Eddy M. Rojas, Dean

Riad S. Alakkad, Associate Dean for Undergraduates Studies

John G. Weber, Associate Dean for Graduate Studies

## Our Vision

The Vision of the School of Engineering is to become a preeminent engineering school providing transformational learning experiences that prepare engineering students for leadership, service and success in life, profession and society. It is our goal to be recognized for outstanding engineering research that positively advances the human condition, addresses critical needs of the world and provides economic growth to our region, our nation and our world. Finally, we are committed to being a nurturing, inclusive environment that promotes the development of all members of the School of Engineering family to their full potential while supporting and advancing the Catholic and Marianist mission of the University of Dayton.

## Our Mission

The Mission of the School of Engineering is to educate complete professionals who have an integrated knowledge of the theory and practice of engineering together with an equally strong understanding of the arts and sciences that will prepare them for fulfilling careers of leadership, service and life-long learning for the good of society.

## Our Purpose

The School of Engineering has as its primary purpose the education of men and women toward a profound knowledge that engineering is more than a problem-solving discipline. While our curriculum and our research do not directly address issues of faith, we nonetheless affect in many ways the character and sensibilities of our students, not just as problem solvers but as individuals who respect the world that they shape for the good of others. Accordingly, our students receive an education that is rigorously directed toward advanced knowledge in engineering, while demonstrating at every turn the important relationships and interdependencies that exist between engineering and the rest of the disciplines across the full spectrum of human knowledge. We therefore educate students to be both intellectually astute and discerning in all their work and morally responsible in the face of the demands and rewards of our ever-changing world.

As an educational unit of a private university, the School of Engineering strongly emphasizes the advising of students so that they may achieve their educational objectives within the engineering program. First-year students are advised by an advising team. At the end of the second semester, each student is assigned a faculty advisor in his/her program. Academic advising begins before the students begin their formal course work and continues as they progress toward their objectives.

The broader responsibilities of the engineering profession demand that the professional education of an engineer include a significant component of humanities, ethics and social science studies so that the student will become aware of the urgent problems of society and develop a deeper appreciation of the cultural achievements of humanity. Additionally, such studies provide the proper framework to ensure that scientific discoveries and developments by engineers may result in the true advancement of the human race.

## Academic Programs

The engineering program in each of the fields of chemical (p. 365), civil (p. 373), computer (p. 380), electrical (p. 379) and mechanical engineering (p. 403) is designed to lead to a bachelor's degree in a four-year period. While students pursue curricula they themselves have chosen according to their fields of interest, they all take certain core courses in mathematics, chemistry, physics, English and engineering fundamentals. All of the programs permit additional specialization (as an overload) in minors in areas such as aerospace engineering (p. 404), bioengineering (p. 369), chemical processing (p. 369), composite materials engineering (p. 370), computer systems (p. 382), engineering management (p. 386), engineering mechanics (p. 375), environmental engineering (p. 375), materials engineering (p. 370), mechanical systems (p. 404), operations engineering (p. 386), polymer materials (p. 370), signals and systems (p. 382), structures (p. 375), transportation engineering (p. 375) and water resources engineering (p. 376) in the School of Engineering and in other areas such as languages, music and political science in other units of the University. Concentrations in the School of Engineering include aerospace engineering (p. 404), electro-optics (p. 381), energy systems-chemical (p. 369), energy systems-mechanical (p. 404) and robotics (p. 382). Although emphasis is on fundamental theories, continued attention is paid to the solution of practical problems which the student will encounter in the practice of engineering.

The programs in chemical engineering, civil engineering, computer engineering, electrical engineering and mechanical engineering are accredited by the Engineering Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, telephone: (410) 347-7700.

The programs in electronic and computer, industrial, global manufacturing systems and mechanical engineering technology are accredited by the Engineering Technology Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, telephone: (410) 347-7700.

## Courses

### EGR 100. Enrichment Workshop. 0 Hours

A workshop structured to provide collaborative learning of engineering calculus facilitated with upper-class engineering students. Required course both semesters for first-year students.

### EGR 102. Seminar for Undergrad Engineering Students. 0 Hours

Introduction to engineering faculty, facilities, and curriculum; survey of career opportunities in engineering; orientation to the university. This course is part of the Integrated Engineering Core for all engineering students.

### EGR 103. Engineering Innovation. 2 Hours

First year multi-disciplinary innovation projects primarily geared towards skill development in the areas of requirements analysis, creativity, conceptual design, design and problem-solving processes, prototyping, teamwork, and project communications. Application to the development of a new product or technology meeting societal needs. This course is part of the Integrated Engineering Core for all engineering students.

**EGR 198. Multidisciplinary Research & Innovation Laboratory. 1-6 Hours**

Students participate in 1.) selection and design, 2.) investigation and data collection, 3.) analysis and 4.) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.

**EGR 198H. Multidisciplinary Research & Innovation Laboratory. 1-6 Hours**

Students participate in 1.) selection and design, 2.) investigation and data collection, 3.) analysis and 4.) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.

**EGR 200. Professional Development Seminar. 0 Hours**

Presentations on contemporary and professional engineering subjects by students, faculty, and engineers in active practice. The seminar addresses topics in key areas that complement traditional courses and prepare distinctive graduates, ready for life and work. Registration required for all sophomore students.

**EGR 201. Engineering Mechanics. 3 Hours**

This course provides an introduction to mechanics as applied to engineering problems. Principles of force and moment balance, work, and energy conservation are applied to systems in static equilibrium. The similarity of balance laws applied to mechanical behavior to those used in thermodynamics and electric circuits is introduced. Students are introduced to the concepts of free-body diagrams and equivalent systems of forces, properties of areas and sections, analysis of simple structures, internal forces, stress, and material failure. Introduces a common problem-solving approach and processes to address and solve open ended problems and creative application of theory. Both analytical and computer solutions of engineering mechanics problems are emphasized. This course is part of the Integrated Engineering Core for all engineering students. Prerequisite(s): MTH 168; PHY 206.

**EGR 201H. Engineering Mechanics. 3 Hours**

This course provides an introduction to mechanics as applied to engineering problems. Principles of force and moment balance, work, and energy conservation are applied to systems in static equilibrium. The similarity of balance laws applied to mechanical behavior to those used in thermodynamics and electric circuits is introduced. Students are introduced to the concepts of free-body diagrams and equivalent systems of forces, properties of areas and sections, analysis of simple structures, internal forces, stress, and material failure. Introduces a common problem-solving approach and processes to address and solve open ended problems and creative application of theory. Both analytical and computer solutions of engineering mechanics problems are emphasized. This course is part of the Integrated Engineering Core for all engineering students. Prerequisite(s): MTH 168; PHY 206.

**EGR 202. Engineering Thermodynamics. 3 Hours**

This course provides an introduction to engineering thermodynamics, emphasizing the vital importance of energy generation and efficiency from a multi-disciplinary perspective. State descriptions of pure substances and mixtures. Control volume analysis and conservation principles applied to systems with respect to mass, energy, and entropy with applications to power, refrigeration, chemically reacting and other energy conversion systems. Introduces a common problem-solving approach and processes to address real, open ended problems and creative application of theory. Both analytical and computer solutions of engineering thermodynamics problems are emphasized. This course is part of the Integrated Engineering Core for all engineering students. Prerequisite(s): MTH 168.

**EGR 203. Electrical & Electronic Circuits. 3 Hours**

This course provides an introduction to the discipline of Electrical and Computer Engineering. Covers principles of linear circuit analysis and problem solving techniques associated with circuits containing both passive and active components. Students are introduced to DC circuit analysis, AC circuit analysis, and transient circuit analysis. Applications of basic electronic devices including diodes, transistors, and operational amplifiers are studied. Both analytical and computer solutions of electrical and electronic circuit problems are emphasized. This course is part of the Integrated Engineering Core for all engineering students. Prerequisite(s): MTH 168.

**EGR 298. Multidisciplinary Research & Innovation Laboratory. 1-6 Hours**

Students participate in 1.) selection and design, 2.) investigation and data collection, 3.) analysis and 4.) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.

**EGR 299. Innovation Design & Entrepreneurship. 3 Hours**

No description available.

**EGR 311. Principles of Nanotechnology. 3 Hours**

Nanoscale properties: optical, mechanical and thermal effects at the nanoscale, quantum confinement effects. Fabrication techniques: top down and bottom up techniques; nano-patterning, thin films. Nanometrology: scanning electron microscope, atomic force and microscope. Nanoelectronics: single electron devices, graphene and carbon nanotube electronics. Carbon nanotubes, quantum dots, nanophotonics.

**EGR 320. Systems Design Scholars Seminar. 3 Hours**

Interdisciplinary systems-design experience to emphasize the basic problem-solving approach and philosophy of engineering for students of varied backgrounds. By permission only.

**EGR 323. Project Management. 3 Hours**

No description available.

**EGR 330. Engineering Design & Appropriate Technology. 0-3 Hours**

An experiential course in appropriate technology and engineering design which spans the winter and summer semesters and includes language preparation, cultural immersion, selected readings, and discussions on appropriate technology and a six to sixteen week summer service-learning experience focused on technical or engineering related work in a developing country. Prerequisite(s): Junior or senior status; permission of instructor.

**EGR 398. Multidisciplinary Research & Innovation Laboratory. 1-3 Hours**

Students participate in 1.) selection and design, 2.) investigation and data collection, 3.) analysis and 4.) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.

**EGR 411. Advanced Nanotechnology. 3 Hours**

Nanotechnology in information, energy, fabrication and metrology: data storage, nanoelectronics, 3-D transistors; nanomaterials in photovoltaics, fuel cells; thin films, optical and non-optical lithography, MEMS, nanofabrication processes; scanning electron microscopy.

**EGR 493H. Honors Thesis. 3 Hours**

Selection, design, investigation, and completion of an independent, original research study resulting in a document prepared for submission as a potential publication and a completed undergraduate thesis. Restricted to students in University Honors Program.

**EGR 494H. Honors Thesis. 3 Hours**

Selection, design, investigation, and completion of an independent, original research study resulting in a document prepared for submission as a potential publication and a completed undergraduate thesis. Restricted to students in University Honors Program. Prerequisite(s): EGR 493.

**EGR 498H. Honors Thesis. 3-6 Hours**

Selection, design, investigation, and completion of an independent, original research study resulting in a document prepared for submission as a potential publication and a completed undergraduate thesis. Restricted to students in University Honors Program.

**EGR 499. Engineering Systems Design. 3 Hours**

This course will provide students of varied backgrounds with an interdisciplinary systems-design experience of applying basic engineering problem-solving and process-oriented approaches to a set of case studies while examining those case studies through different philosophical perspectives on engineering itself.

## Engineering Technology

The School of Engineering also offers a Bachelor of Science in Engineering Technology. The programs in which the degree is offered are:

- Electronic and Computer Engineering Technology
- Global Manufacturing Systems Engineering Technology
- Industrial Engineering Technology
- Mechanical engineering Technology

Students in Engineering Technology programs participate in an integrated education core in which they study specialized technical courses that emphasize rational thinking and the application of engineering and scientific principles to the practical solution of technological problems. Extensive laboratory experience aids the students in the design, analysis and implementation of systems, as well as experiencing real-world application problems. The multidisciplinary curriculum culminates in a capstone design project. All programs offer a cooperative education program in which the student is allowed to alternate work and study semesters after the first year. Additionally, many

students acquire experience through internships, summer work or study abroad.

Graduates are critical thinkers who can apply established scientific and engineering knowledge to implement systems, and are prepared to take places in society as responsible, humane and complete professionals. They work effectively on multidisciplinary design teams building complex systems. Graduates are usually involved in the design, performance evaluation, service and sales of products, equipment, and manufacturing systems or the management of these activities. Several years after graduation, they may find themselves in management positions.

The University of Dayton engineering technology programs prepare graduates who:

- are competent and productive in the practice of both the technical and communication aspects of their profession;
- demonstrate ethical and professional standards of conduct
- exhibit leadership qualities as appropriate for the practice of their profession;
- are involved in service activities that benefit their profession and their community; and
- are engaged in continuing professional development.

### TRANSFER STUDENTS

The engineering technology programs welcome transfer students from associate degree programs in engineering technology who wish to pursue the Bachelor of Science in Engineering Technology. Graduates of two-year associate degree programs in engineering technology should normally expect to undertake at least two additional years of work for the bachelor's degree.

### MINORS IN ENGINEERING TECHNOLOGY

Students majoring in any engineering technology program may earn a minor in another engineering technology program by completing 12 approved semester hours of work in the second discipline. Courses already required in the student's program may not be counted in the minor. The director of the program in which the minor is to be earned is responsible for approving the list of courses for the minor.

The minors available to engineering technology students are:

- Automotive Systems
- Electronic and Computer Engineering Technology
- Global Manufacturing Systems Engineering Technology
- Industrial Automation and Applied Robotic Systems
- Industrial Engineering Technology
- Integrated Arts & Technology
- Mechanical Engineering Technology
- Quality Assurance
- Sustainable Manufacturing

A minor in Engineering Technology is also offered for students enrolled in majors in the College of Arts and Sciences, the School of Business Administration, and the School of Education and Health Sciences.

### ACCREDITATION

The programs in electronic & computer, global manufacturing systems, industrial, and mechanical engineering technology are accredited by the Engineering Technology Accreditation Commission of ABET 111



Market Place, Suite 1050, Baltimore, MD 21202-4012, telephone: (410) 347-7700.

## ENGINEERING TECHNOLOGY FIRST-YEAR REQUIREMENTS

Students selecting any of the four engineering technology majors should take the courses prescribed under the Sample Plan of Study. Undeclared engineering technology students should follow the first-year schedule below.

### Total first-year requirements:

CHM 123 & 123L	General Chemistry and General Chemistry Laboratory	4
EGR 103	Engineering Innovation	2
ENG 100 & ENG 200 or ENG 200H	Writing Seminar I and Writing Seminar II Writing Seminar II	6
HST 103	The West & the World	3
MCT 110L	Technical Drawing & CAD Laboratory	2
MTH 137 & MTH 138	Calculus I with Review and Calculus I with Review	8
PHL 103	Introduction to Philosophy	3
REL 103	Introduction to Religious and Theological Studies	3
SET 100	Engineering Technology First Year Seminar	0
SET 101	Enrichment Workshop	0
SET 153L	Technical Computation Laboratory	1
Total Hours		32

## Minors in Engineering

The student majoring in chemical, civil, computer, electrical or mechanical engineering may choose a minor area of technical study. The minors program in the School of Engineering provides an opportunity to specialize in a particular technical sub-area while still pursuing a major program of study in one of the traditional and well recognized engineering disciplines. The minors program was designed in response to the needs of industry and government and to the educational needs and career objectives of students. Election of the minor is optional; it may require additional courses for completion.

The minor is defined as at least 12 semester hours of work. It can be composed of any number of 1- to 4-semester-hour courses selected from the approved list of minor areas of study.

The minors available to engineering students are:

- Aerospace Engineering (p. 402)
- Automotive Systems (p. 387)
- Bioengineering (p. 365)
- Chemical Processing (p. 365)
- Composite Materials Engineering (p. 365)
- Computer Systems (p. 378)
- Electrical and Computer Engineering Technology (p. 387)
- Energy Production Engineering (p. 365)
- Engineering Management (p. 386)
- Engineering Mechanics (p. 373)
- Engineering Technology (p. 387)
- Environmental Engineering (p. 373)
- Global Manufacturing Systems Engineering Technology (p. 387)

- Industrial Automation and Applied Robotic Systems (p. 387)
- Industrial Engineering Technology (p. 387)
- Integrated Arts and Technology (p. 387)
- Materials Engineering (p. 365)
- Mechanical Engineering Technology (p. 387)
- Mechanical Systems (p. 402)
- Operations Engineering (p. 386)
- Polymer Materials (p. 365)
- Quality Assurance (p. 387)
- Signals and Systems (p. 378)
- Structures (p. 373)
- Sustainable Manufacturing (p. 387)
- Transportation Engineering (p. 373)
- Water Resources Engineering (p. 373)

A 12 semester hour concentration in electro-optics is available to electrical and computer engineering undergraduates. A 16 semester hour concentration in aerospace engineering is also available to mechanical engineering students. Additional minors from outside the School of Engineering are available in many subject areas.

Students, in consultation with their faculty advisors, normally select the minor or concentration in the second semester of their sophomore year. The minor or concentration is designated on the student's transcript.

## Degree Requirements

A student enrolls in the curriculum prescribed for the academic year in which he or she is registered as a first-year student at the University of Dayton or elsewhere. If for any reason it is necessary or desirable to change to a subsequently established curriculum, the student must meet all of the requirements of the new curriculum.

The degrees Bachelor of Chemical, Civil, Electrical or Mechanical Engineering, Bachelor of Science in Computer Engineering and Bachelor of Science in Engineering Technology are conferred at commencement if the general requirements enumerated here (p. 37) have been fulfilled as well as those listed below:

1. All bachelor's degrees granted by the University of Dayton require a cumulative grade point average of at least 2.0.
2. The cumulative grade-point average in all courses which have an engineering prefix must be at least 2.0 (C average).
3. All prescribed courses outlined in the respective curricula must have been passed with grades of D or better. Although courses may be scheduled in terms other than as listed, all prerequisites and corequisites must be met.
4. All students in the School of Engineering must register under Grade Option 1 for all courses in engineering, mathematics, and science except those offered only under Grade Option 2.
5. The student must have taken their last 30 semester hours through the School of Engineering at the University of Dayton.

The semester hours of credit required for graduation in each engineering curriculum administered by the School of Engineering are as follows:

Bachelor of Chemical Engineering	137
Bachelor of Civil Engineering	138
Bachelor of Electrical Engineering	134



Bachelor of Mechanical Engineering	132
Bachelor of Science in Computer Engineering	137

The semester hours of credit required for graduation in each engineering technology curriculum administered by the School of Engineering are as follows:

#### Bachelor of Science in Engineering Technology

Electronic and Computer Engineering Technology Major	131
Global Manufacturing Systems Engineering Technology Major	133
Industrial Engineering Technology Major	131
Mechanical Engineering Technology Major	132

## Engineering First-Year Requirements

Students who are recent high school graduates or who have earned fewer than 15 semester hours of collegiate credit are classified as first-year students and must meet common engineering program requirements. Such credit requirements may be met in a number of ways, including:

1. Advanced college-level course work at the University of Dayton or other collegiate institutions,
2. Advanced placement examinations,
3. Departmental examinations during the first term, or
4. Taking the prescribed courses as part of the first year.

Required First-Year Program		31-35
CHM 123	General Chemistry	3
CMM 100	Principles of Oral Communication	3
EGR 100	Enrichment Workshop <sup>2</sup>	0
EGR 103	Engineering Innovation	2
ENG 100 & ENG 200 or ENG 200H	Writing Seminar I and Writing Seminar II Writing Seminar II	3-6
HST 103	The West & the World <sup>3</sup>	3
MTH 168 & MTH 169	Analytic Geometry & Calculus I and Analytic Geometry & Calculus II	8
PHL 103	Introduction to Philosophy	3
PHY 206	General Physics I - Mechanics <sup>4</sup>	3
REL 103	Introduction to Religious and Theological Studies	3
Basic Science Laboratory <sup>5</sup>		1
First-Year Student Orientation		0-1
Programming <sup>6</sup>		0-4

<sup>1</sup> Chemical engineering majors take CMM the first semester. Electrical, computer and mechanical engineering majors take this requirement the second semester. Civil engineering majors postpone this requirement.

<sup>2</sup> Required both semesters.

<sup>3</sup> Chemical engineering students must take CHM 124 and CHM 124L in the second semester and postpone one of the three Humanities Base courses until the third semester.

- 4 Chemical engineering students postpone this requirement until the second semester.
- 5 Chemical, civil, and mechanical engineering students must take CHM 123L; computer and electrical engineering students take PHY 210L.
- 6 Chemical, mechanical and civil engineering students are not required to take any programming course in the first year. Computer and electrical engineering students must take CPS 150 in the second semester. Mechanical engineering students take MEE 104L in the second semester of the first year.

## Transfer Students

The engineering programs welcome transfer students from both community and senior colleges and work closely with many schools to facilitate transfers from pre-engineering programs. Students may complete the first two years of study in other accredited institutions and transfer to the University of Dayton with little or no loss of credit provided that they have followed programs similar to those prescribed by the University of Dayton School of Engineering.

The School of Engineering has dual degree arrangements as well as curriculum agreements with Sinclair Community College and Edison Community College.

## Bachelor's Plus Master's Program

The School of Engineering offers a combined program leading to both a bachelor's degree in an engineering major and a master's degree. Physics majors (College of Arts and Sciences) may also participate. The program is designed for the qualified student who wishes to pursue either greater specialization in a major area or to complement the undergraduate program with a related graduate-level concentration. Most students who select the program have received some advanced placement upon entry to engineering at the first-year level or take occasional summer courses.

The formal request for entrance into this program may be made as early as before the first semester of the student's junior year, but the student should consult their department to determine exactly when this request should be made. Admission requirements include a minimum cumulative grade point average of 3.00 and permission from the chairperson of the department corresponding to the student's undergraduate major and chair/program director of selected master's program. Students must formally apply to the graduate school during their senior year. Selection of the graduate (master's) program area is indicated below:

Undergraduate Program	Graduate Program Selections
Chemical Engineering	Bioengineering, Chemical Engineering, Civil Engineering, Electro-Optics*, Engineering Management, Engineering Mechanics, Management Science, Materials Engineering, Renewable and Clean Energy
Civil Engineering	Bioengineering, Civil Engineering, Engineering Management, Engineering Mechanics, Management Science, Materials Engineering, Renewable and Clean Energy

Computer Engineering	Bioengineering, Civil Engineering, Electrical Engineering, Electro-Optics*, Engineering Management, Engineering Mechanics, Management Science, Materials Engineering, Renewable and Clean Energy
Electrical Engineering	Bioengineering, Civil Engineering, Electrical Engineering, Electro-Optics, Engineering Management, Engineering Mechanics, Management Science, Materials Engineering, Renewable and Clean Energy
Mechanical Engineering	Aerospace Engineering, Bioengineering, Civil Engineering, Electro-Optics*, Engineering Management, Engineering Mechanics, Management Science, Materials Engineering, Mechanical Engineering, Renewable and Clean Energy
Engineering Technology	Engineering Management, Management Science, Materials Engineering
Physics	Electro-Optics, Materials Engineering

\* This major may need additional courses to qualify for the master's program.

The department chairperson and the graduate program director serve as an advisory committee to the student in establishing the combined program requirements. The first-year, sophomore and junior years follow the curriculum of the student's selected bachelor's program.

A student who elects the combined program must satisfy both undergraduate and graduate degree requirements as to required cumulative grade point average for graduation. The graduate of the combined program will receive a bachelor's degree in the undergraduate major (e.g., Bachelor of Mechanical Engineering) and a master's degree in the graduate area (e.g., Master of Science in Materials Engineering). A student in the 5-year combined program who chooses not to complete the program must complete all the undergraduate major program requirements to receive the bachelor's degree.

Course Area	Semester	Hours
Senior Year	1st Term	2nd Term
Undergraduate department major	11	11
Undergraduate department or University requirement or electives	3	3
Graduate major (taken as graduate credit)	3	3
Total semester hours	17	17
Fifth Year		

Graduate major (including thesis or project)*	12	12
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\* Civil Engineering majors require three additional semester hours for project option.

## ETHOS

Engineers in Technical, Humanitarian Opportunities of Service-Learning

The ETHOS Program is founded on the belief that engineers are more apt and capable of serving our world appropriately when they have experienced opportunities that increase their understanding of technology's global linkage with values, culture, society, politics and economy. ETHOS seeks to provide these opportunities through international and domestic service internships as well as through collaborative research and hands-on classroom projects that support the development of appropriate technologies for the developing world.

Such experiences expose students to alternative nontraditional technologies that are based on fundamental science and engineering principles and at the same time provide tangible and immediate impacts improving the lives of those who use them. ETHOS maintains as its educational objective to challenge students to think creatively and independently, to work as a team and communicate effectively, and to address issues of appropriate technology, environmental ethics, social responsibility and cultural sensitivity.

## Optional Cooperative Education

Cooperative education offers the student the opportunity to put classroom work into practical use while still in school, resulting in early career identification and greater motivation as well as providing a source of funds. All students majoring in engineering and engineering technology may participate in the cooperative education program. To be eligible, students must have completed three semesters and have a cumulative grade-point average of not less than 2.3. Those applying for the program will be accepted on the basis of grade-point average, motivation and attitude. The number of students placed depends on the availability of jobs.

## Programs of Study

To learn more about the available programs in the School of Engineering, explore the departments:

- Chemical and Materials Engineering (p. 365)
- Civil and Environmental Engineering and Engineering Mechanics (p. 373)
- Electrical and Computer Engineering (p. 378)
- Engineering Management (p. 386)
- Engineering Technology (p. 387)
- Mechanical and Aerospace Engineering (p. 402)

## Chemical and Materials Engineering

Major:

- Bachelor of Chemical Engineering (p. 366)

**Concentration:**

- Energy Systems-Chemical (p. 369)

**Minors:**

- Bioengineering (p. 369)
- Chemical Processing (p. 369)
- Composite Materials Engineering (p. 370)
- Energy Production Engineering (p. 370)
- Materials Engineering (p. 370)
- Polymer Materials (p. 370)

The Chemical and Materials Engineering Department offers an undergraduate program leading to a Bachelor of Chemical Engineering degree. Chemical engineering applies the principles of the physical sciences, economics and human relations to research, design, build and supervise facilities that convert raw materials into useful products and services.

The majority of chemical engineers are involved in the chemical process industries that produce many of the materials and items needed in everyday life. These include medicine, food, fertilizers, plastics, synthetic fibers, petroleum, petrochemicals, ceramics, and pulp and paper products. A chemical engineer may pursue a professional career in many other fields, such as energy conversion, pollution control, medical research and materials development in aerospace and electronic industries. Chemical engineers are employed in research, development, design, production, sales, consulting and management positions. They are also found in government and academia. Many use a chemical engineering education as a pathway to law, medicine or corporate management.

The curriculum in chemical engineering serves as basic training for positions in these diverse areas of the manufacturing industry or for graduate study leading to advanced degrees. The first part of the chemical engineering curriculum provides a firm foundation in mathematics, physics and chemistry. The chemistry background is stressed. The second part of the curriculum offers a balance between classroom and laboratory experience in stressing chemical engineering topics such as transport phenomena, thermodynamics, kinetics and reactor design, separation processes, fluid flow and heat transfer operations, process control and process design. The development of design tools, communication and interpersonal skills is integrated throughout the curriculum. The curriculum allows minors in emerging technologies such as bioengineering, environmental engineering and materials engineering. Those interested in attending medical/dental school can pursue a premed preparation as part of their curriculum.

The educational objectives of the chemical engineering program graduates are:

- Chemical Engineering graduates have successful careers in the chemical process industry with the skills necessary to have opportunities to work in non-traditional industries and positions.
- Chemical Engineering graduates are successful at prestigious graduate, medical, and law schools.
- Chemical Engineering graduates are committed to performing ethically while serving their professions, companies, and communities.
- Chemical Engineering graduates exhibit strong critical thinking skills from the breadth of their general education and the depth of their

foundation in engineering principles, and engage in continuous intellectual and personal growth.

**Faculty**

Charles E. Browning, Department Chairperson

Michael Elsass, Chemical Engineering Director

Professors Emeriti: Lu, Snide

Professors: Browning, Eylon, Flach, Lafdi, Lee, Myers, T. Saliba, Sandhu, Wilkens

Assistant Professor: D. Comfort, K. Comfort

Senior Lecturer: Ciric

Lecturer: Elsass

## Bachelor of Chemical Engineering (CME) minimum of 137 credit hours

**Common Academic Program (CAP)**

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
HST 103 West and the World	
REL 103 Introduction to Religious and Theological Studies	
PHL 103 Intro To Philosophy	
ENG 100 Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>	0-3
ENG 200 Writing Seminar II	
Oral Communication	3
CMM 100 Principles of Oral Communication	
Mathematics	3
Social Science	3
Arts	3
Natural Sciences <sup>4</sup>	7
Crossing Boundaries	variable credit
Faith Traditions	
Practical Ethical Action	
Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

**Major Requirements**

CHM 123 ( <a href="https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text">https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text</a> )	General Chemistry	3
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CHM 123L ( <a href="https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text&amp;Toolbar=PageWizard">https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text&amp;Toolbar=PageWizard</a> )	Gen Chemistry Lab	1	CME 311 ( <a href="https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text&amp;Toolbar=PageWizard">https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text&amp;Toolbar=PageWizard</a> )	Chm Engr Thrmdynmcs	3
CHM 124 ( <a href="https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text">https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text</a> )	General Chemistry	3	CME 324 ( <a href="https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text">https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text</a> )	Transport Phenom I	3
CHM 124L ( <a href="https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text&amp;Toolbar=PageWizard">https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text&amp;Toolbar=PageWizard</a> )	Gen Chemistry Lab	1	CME 325 ( <a href="https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text&amp;Toolbar=PageWizard">https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text&amp;Toolbar=PageWizard</a> )	Transport Phenom II	3
CHM 313 ( <a href="https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text">https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text</a> )	Organic Chemistry	3	CME 326L ( <a href="https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text">https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text</a> )	Transport Phenom Lab	2
CHM 313L ( <a href="https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text&amp;Toolbar=PageWizard">https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text&amp;Toolbar=PageWizard</a> )	Organic Chemistry Lab	1	CME 365 ( <a href="https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text&amp;Toolbar=PageWizard">https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text&amp;Toolbar=PageWizard</a> )	Separatn Techniques	3
CHM 314 ( <a href="https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text">https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text</a> )	Organic Chemistry	3	CME 381 ( <a href="https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text">https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text</a> )	Adv Math-Chem Engrs	3
CHM 314L ( <a href="https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text&amp;Toolbar=PageWizard">https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text&amp;Toolbar=PageWizard</a> )	Organic Chem Lab	1	CME 408 ( <a href="https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text&amp;Toolbar=PageWizard">https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text&amp;Toolbar=PageWizard</a> )	Seminar (2 semesters)	0-1
CME 101 ( <a href="https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text">https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text</a> )	Intro to CME (2 semesters)	0-1	CME 430 ( <a href="https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text">https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text</a> )	CME Design I	3
CME 200 ( <a href="https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text&amp;Toolbar=PageWizard">https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text&amp;Toolbar=PageWizard</a> )	Prof Development Sem	0-1	CME 431 ( <a href="https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text&amp;Toolbar=PageWizard">https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text&amp;Toolbar=PageWizard</a> )	CME Design II	3
CME 203 ( <a href="https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text">https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text</a> )	Matl&Energy Balance	3	CME 452 ( <a href="https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text">https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text</a> )	Process Control	3
CME 281 ( <a href="https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text&amp;Toolbar=PageWizard">https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text&amp;Toolbar=PageWizard</a> )	Chm Engr Computatns	3	CME 453L ( <a href="https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text&amp;Toolbar=PageWizard">https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text&amp;Toolbar=PageWizard</a> )	Process Control Lab	2
CME 306 ( <a href="https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text">https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text</a> )	CME Rctn Kntcs&Engr	3	CME 465 ( <a href="https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text">https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text</a> )	Fluid Flow&Ht Tr Pro	3

CME 466L ( <a href="https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text&amp;Toolbar=PageWizard">https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text&amp;Toolbar=PageWizard</a> )	2	MTH 168 ( <a href="https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text">https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text</a> )	4
CMM 100 ( <a href="https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text">https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text</a> )	3	MTH 169 ( <a href="https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text&amp;Toolbar=PageWizard">https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text&amp;Toolbar=PageWizard</a> )	4
EGR 100 ( <a href="https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text&amp;Toolbar=PageWizard">https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text&amp;Toolbar=PageWizard</a> )	0	MTH 218 ( <a href="https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text">https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text</a> )	4
EGR 103 ( <a href="https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text">https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text</a> )	2	MTH 219 ( <a href="https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text&amp;Toolbar=PageWizard">https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text&amp;Toolbar=PageWizard</a> )	3
EGR 201 ( <a href="https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text&amp;Toolbar=PageWizard">https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text&amp;Toolbar=PageWizard</a> )	3	PHL 103 ( <a href="https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text">https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text</a> )	3
EGR 202 ( <a href="https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text">https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text</a> )	3	PHY 206 ( <a href="https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text&amp;Toolbar=PageWizard">https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text&amp;Toolbar=PageWizard</a> )	3
EGR 203 ( <a href="https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text&amp;Toolbar=PageWizard">https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text&amp;Toolbar=PageWizard</a> )	3	PHY 207 ( <a href="https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text">https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text</a> )	3
ENG 100 ( <a href="https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text">https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text</a> ) and Writing Seminar II	6	REL 103 ( <a href="https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text&amp;Toolbar=PageWizard">https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text&amp;Toolbar=PageWizard</a> )	3
& ENG 200 ( <a href="https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text">https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text</a> )		SSC 200 ( <a href="https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text">https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text</a> )	3
or ENG 200H ( <a href="https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text">https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text</a> )		Chemistry or Biology elective <sup>1</sup>	3
HST 103 ( <a href="https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text&amp;Toolbar=PageWizard">https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text&amp;Toolbar=PageWizard</a> )	3	CME elective <sup>1</sup>	3
or HST 198 ( <a href="https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text&amp;Toolbar=PageWizard">https://nextcatalog.udayton.edu/courseleaf/js/fckeditor/editor/fckeditor.html?InstanceName=attr_text&amp;Toolbar=PageWizard</a> )		Elective <sup>2</sup>	3
		Electives	12
		Engineering/Science electives <sup>1</sup>	6
		Total Hours	

<sup>1</sup> Must be selected from list approved by the Chemical and Materials Engineering Department.

<sup>2</sup> Must be selected from approved list of PHL or REL ethics courses.



## Concentration in Energy Systems-Chemical (CES)

This concentration is open to all engineering students. The Energy Systems Concentration provides an interdisciplinary concentration in energy systems and its social consequences. Students completing this concentration will be prepared for jobs in both industrial and building energy systems, a rapidly growing market.

ASI 320	Cities & Energy <sup>1,2</sup>	3
CME 203	Material & Energy Balances	3
CME 311	Chemical Engineering Thermodynamics	3
CME 324	Transport Phenomena I	3
CME 325	Transport Phenomena II	3
CME 326L	Transport Phenomena Laboratory	1-2
CME 430	Chemical Engineering Design I	3
CME 431	Chemical Engineering Design II	3
CME 465	Fluid Flow & Heat Transfer Processes	3
CME 466L	Chemical Engineering Unit Operations Laboratory	2
<b>CME elective</b>		
Select one course from:		3
CME 486	Introduction to Petroleum Engineering	
or CME 586	Introduction to Petroleum Engineering	
CME 524	Electrochemical Power	
or MEE 575	Fracture & Fatigue of Metals & Alloys I	
CME 565	Fundamentals of Combustion	
CME 574	Fundamentals of Air Pollution I	
Select two courses from:		6
Select any CME elective course above <sup>3</sup>		
AEE 560	Propulsion Systems	
or MEE 560	Propulsion Systems	
CME 507	Advanced Thermodynamics	
or MEE 511	Advanced Thermodynamics	
CME 579	Materials for Advanced Energy Applications	
or MAT 579	Materials for Advanced Energy Applications	
MEE 413	Propulsion	
or MEE 513	Propulsion	
MEE 420	Energy Efficient Buildings	
or MEE 569	Energy Efficient Buildings	
MEE 471	Design of Thermal Systems	
or MEE 571	Design of Thermal Systems	
MEE 473	Renewable Energy Systems	
or MEE 573	Renewable Energy Systems	
MEE 478	Energy Efficient Manufacturing	
or MEE 578	Energy Efficient Manufacturing	
Total Hours		36-37

<sup>1</sup> Or another approved humanities elective related to Energy Systems.

<sup>2</sup> Satisfies History requirement.

<sup>3</sup> Course cannot have already been chosen as CME elective.

## Minor in Bioengineering (BIE)

This minor is open to chemical, civil, computer, electrical and mechanical engineering majors. The program is designed to expose the student to the use of engineering principles in biological systems and applications.

BIO 151	Concepts of Biology I: Cell & Molecular Biology	3
or BIO 152	Concepts of Biology II: Evolution & Ecology	
CME 490	Introduction to Bioengineering	3
or CME 590	Introduction to Bioengineering	
Select one course from:		3
CME 491	Biomedical Engineering I	3
or CME 591	Biomedical Engineering I	
MEE 430	Biomechanical Engineering	3
or MEE 530	Biomechanical Engineering	
Select one course from: <sup>1</sup>		3
BIE 511	Biomaterials	3
BIE 595	Special Problems in Bioengineering	
BIO 151	Concepts of Biology I: Cell & Molecular Biology	
BIO 152	Concepts of Biology II: Evolution & Ecology	
BIO 312	General Genetics	
BIO 403	Physiology I	
BIO 411	General Microbiology	
BIO 440	Cell Biology	
CHM 420	Biochemistry	
CME 530	Biomaterials	3
CHM 451	General Biochemistry I	
CHM 452	General Biochemistry II	
CME 491	Biomedical Engineering I	3
or CME 591	Biomedical Engineering I	
CME 492	Chemical Sensors & Biosensors	
Total Hours		27

<sup>1</sup> Course cannot have already been chosen above.

## Minor in Chemical Processing (CHP)

This minor is open to civil, computer, electrical and mechanical engineering majors. The program is designed to acquaint the student with industrial operations in the chemical process industries such as heat exchange, distillation, extraction, humidification, etc. The elective courses cover a wide range of topics to accommodate the student's special interests.

CME 203	Material & Energy Balances	3
CME 324	Transport Phenomena I	3
CME 365	Separation Techniques	3
Select one course from:		3
CME 306	Chemical Reaction Kinetics & Engineering	
CME 430	Chemical Engineering Design I	
CME 452	Process Control	
CME 465	Fluid Flow & Heat Transfer Processes	
CME 499	Special Problems in Chemical Engineering	
Total Hours		12

## Minor in Composite Materials Engineering (CMA)

This minor is open to chemical, civil and mechanical engineering majors. The program is designed to expose the student to the design, processing and characterization of composite materials and their various applications in industry.

CME 510	High Performance Thermoset Polymers	3
or MAT 510	High Performance Thermostat Polymers	
CME 512	Advanced Composites	3
or MAT 542	Advanced Composites	
Select two courses from:		6
CEE 540	Composites Design	
or MAT 540	Composite Design	
CEE 543	Analytical Mechanics Composite Materials	
or MAT 543	Analytical Mechanics of Composite Materials	
CEE 546	Finite Element Analysis I	
or MEE 546	Finite Element Analysis I	
CME 509	Introduction to Polymer Science - Thermoplastics	
or MAT 509	Introduction to Polymer Science-Thermoplastics	
CME 527	Methods of Polymer Analysis	
or MAT 527	Methods of Polymer Analysis	
CME 528	Chemical Behavior of Materials	
or MAT 528	Chemical Behavior of Materials	
CME 580	Polymer Decomposition, Degradation & Durability	
or MAT 580	Polymer Durability	
Total Hours		12

## MINOR IN ENERGY PRODUCTION ENGINEERING (EPE)

This minor is open to all engineering majors. A selection of courses covering the production of energy:

Select four courses from:		12
BIE/CME/RCL 533	Biofuel	
CME 486/586	Introduction to Petroleum Engineering	
CME/MEE/RCL 524	Electrochemical Power	
CHM/GEO 234	Energy Resources	
ECE 316	Introduction to Electrical Energy Systems	
ECE 583	Advanced Photovoltaics	
MAT 579	Materials for Advanced Energy Applications	
MEE 473/573/RCL 573	Renewable Energy Systems	
RCL 590	Special Problems in Renewable & Clean Energy <sup>1</sup>	
RCL 590	Special Problems in Renewable & Clean Energy <sup>2</sup>	
RCL 590	Special Problems in Renewable & Clean Energy <sup>3</sup>	
Total Hours		12

<sup>1</sup> Must be Thermal Systems Analysis.

<sup>2</sup> Must be Solar Energy Engineering.

<sup>3</sup> Must be Wind Energy Engineering.

## Minor in Materials Engineering (MAT)

This minor is open to all engineering majors. A general overview of materials with choice courses in polymers, composites, nanomaterials and material characterization.

MAT 501	Principles of Materials I	3
MAT 502	Principles of Materials II	3
Select two courses from:		6
CME 509	Introduction to Polymer Science - Thermoplastics	
or MAT 509	Introduction to Polymer Science-Thermoplastics	
CME 510	High Performance Thermoset Polymers	
or MAT 510	High Performance Thermostat Polymers	
CME 511	Principles of Corrosion	
or MAT 511	Principles of Corrosion	
CME 512	Advanced Composites	
or MAT 542	Advanced Composites	
CME 527	Methods of Polymer Analysis	
or MAT 527	Methods of Polymer Analysis	
CME 528	Chemical Behavior of Materials	
or MAT 528	Chemical Behavior of Materials	
CME 579	Materials for Advanced Energy Applications	
or MAT 579	Materials for Advanced Energy Applications	
CME 580	Polymer Decomposition, Degradation & Durability	
or MAT 580	Polymer Durability	
MAT 504	Techniques of Materials Analysis	
MAT 506	Mechanical Behavior of Materials	
MAT 507	Introduction to Ceramic Materials	
MAT 508	Principles of Material Selection	
MAT 521	NDE/SHM	
MAT 535	High Temperature Materials	
MAT 541	Experimental Mechanics of Composite Materials	
MAT 543	Analytical Mechanics of Composite Materials	
MAT 544	Mechanics of Composite Materials	
MAT 575	Fracture & Fatigue of Metals & Alloys I	
MAT 577	Light Structural Metals	
MAT 590	Selected Readings in Materials Engineering	
MAT 595	Special Problems in Materials Engineering	
MAT 601	Surface Chemistry of Solids	
MAT 604	Nanostructured Materials	
MEE 312	Engineering Materials I	
Total Hours		12

## Minor in Polymer Materials (PME)

This minor is open to all engineering majors. Coverage of polymers including thermosets and thermoplastics and composite materials in which polymers are used as constituents. Methods of polymer processing and polymer characterization are also included.

CME 509	Introduction to Polymer Science - Thermoplastics	3
or MAT 509	Introduction to Polymer Science-Thermoplastics	
CME 510	High Performance Thermoset Polymers	3
or MAT 510	High Performance Thermostat Polymers	
Select two courses from:		6
CME 512	Advanced Composites	
or MAT 542	Advanced Composites	
CME 527	Methods of Polymer Analysis	
or MAT 527	Methods of Polymer Analysis	
CME 528	Chemical Behavior of Materials	
or MAT 528	Chemical Behavior of Materials	
CME 580	Polymer Decomposition, Degradation & Durability	
or MAT 580	Polymer Durability	
MAT 540	Composite Design	
MAT 543	Analytical Mechanics of Composite Materials	
Total Hours		12

**First Year**

Fall	Hours Spring	Hours
CME 101	0-1 CHM 124	3
CHM 123 (Satisfies CAP Natural Science)	3 CHM 124L	1
CHM 123L	1 CME 101	0-1
ENG 100 (Satisfies CAP Writing Seminar Requirement)	3 EGR 100	0
EGR 100	0 HST 103 (Satisfies CAP First Year Humanities Common)	3
EGR 103	2 MTH 169	4
MTH 168 (Satisfies CAP Math Requirement)	4 PHY 206 (Satisfies CAP Natural Science)	3
PHL 103 (Satisfies CAP First Year Humanities Common)	3 REL 103 (Satisfies CAP First Year Humanities Common)	3
	<b>16-17</b>	<b>17-18</b>

**Second Year**

Fall	Hours Spring	Hours
CHM 313	3 CHM 314	3
CHM 313L	1 CHM 314L	1
CME 200	0 CME 200	0-1
CME 203	3 CME 281	3
EGR 202	3 CMM 100 (Satisfies CAP Communication)	3
ENG 200 (Satisfies CAP Second Year Writing Seminar)	3 MTH 219	3
MTH 218	4 PHY 207	3
	<b>17</b>	<b>16-17</b>

**Third Year**

Fall	Hours Spring	Hours
CME 311	3 CME 306	3
CME 324	3 CME 325	3
CME 381	3 CME 326L	2

EGR 201	3 Advanced PHL Ethics (Satisfies CAP Crossing Boundaries and Practical Ethical Action)	3
Art Study (Satisfies CAP Art Study)	3 CME 365	3
Social Science (Satisfies CAP Social Science)	3 EGR 203	3
	<b>18</b>	<b>17</b>

**Fourth Year**

Fall	Hours Spring	Hours
Advanced REL (Satisfies CAP Crossing Boundaries Faith Traditions, Diversity and Social Justice)	3 Advanced HST (Satisfies CAP Crossing Boundaries)	3
CME 466L	2 CME 453L	2
CME 430	3 CME 408	0
CME 452	3 CME 431	3
CME 408	0-1 CME Elective	3
CHM/BIO Elective	3 TECH Elective	3
CME 465	3 CME Advanced Elective	3
	<b>17-18</b>	<b>17</b>

Total credit hours: 135-139

**Courses****CME 101. Introduction to Chemical Engineering. 0-1 Hours**

Introduction to the chemical engineering faculty, facilities, and curriculum; survey of career opportunities in chemical engineering. Introduction to the University first-year experience.

**CME 198. Research & Innovation Laboratory. 1-6 Hours**

Students participate in (1) selection and design, (2) investigation and data collection, (3) analysis and (4) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analysing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming and evaluating engineering solutions and engineering designs. Proposals from terams of students will be considered.

**CME 200. Professional Development Seminar. 0-1 Hours**

Presentations on contemporary and professional engineering subjects by students, faculty, and engineers in active practice. The seminar addresses topics in key areas that complement traditional courses and prepare distinctive graduates, ready for life and work. Registration required for all sophomore students.

**CME 203. Material & Energy Balances. 3 Hours**

Introductory course on the application of mass and energy conservation laws to solve problems typically encountered in chemical process industries. Prerequisite(s): CHM 123; MTH 168. Corequisite(s): EGR 202.

**CME 281. Chemical Engineering Computations. 3 Hours**

Development of computational skills with an emphasis on algorithm development and problem solving. Computational skills are applied to typical problems in chemical engineering, engineering data analysis and statistics. Corequisite(s): CME 203.

**CME 298. Research & Innovation Laboratory. 1-6 Hours**

Students participate in (1) selection and design, (2) investigation and data collection, (3) analysis and (4) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.

**CME 306. Chemical Reaction Kinetics & Engineering. 3 Hours**

Chemical reaction kinetics, ideal reactor analysis and design, multiple reactor/reaction systems, and heterogeneous catalysis. Prerequisite(s): CME 311.

**CME 311. Chemical Engineering Thermodynamics. 3 Hours**

Development and application of the fundamental principles of chemical thermodynamics: Vapor/liquid equilibrium, solution thermodynamics, chemical reaction equilibria, and thermodynamic analysis of chemical engineering processes. Prerequisite(s): CME 203; EGR 202; MTH 218.

**CME 324. Transport Phenomena I. 3 Hours**

Viscosity, shell momentum balances, isothermal equations of change, thermal conductivity, shell energy balances, non-isothermal equations of change, mass diffusivity, shell species mass balances, equations of change for multicomponent systems. Prerequisite(s): CME 203, CME 281; MTH 219. Corequisite(s): CME 381.

**CME 325. Transport Phenomena II. 3 Hours**

Multidimensional momentum, energy, and mass transport, dimensionless parameters, turbulence and numerical solution methods. Prerequisite(s): CME 324, CME 381.

**CME 326L. Transport Phenomena Laboratory. 1-2 Hours**

Viscosity, conductivity, diffusion coefficient measurements, velocity, temperature, concentration profiles, engineering instrumentation, and experimental error analysis. Prerequisite(s): CME 324. Corequisite(s): CME 325.

**CME 365. Separation Techniques. 3 Hours**

Equilibrium staged separations: distillation, extraction and absorption, with an emphasis on distillation. Prerequisite(s): CME 311, CME 324.

**CME 381. Advances Mathematics for Chemical Engineers. 3 Hours**

Study of analytical and numerical techniques to support upper-level chemical engineering classes. Vector analysis, matrices, differential equations, numerical integration and differentiation, root finding, and curve fitting ordinary and partial differential equations. Prerequisite(s): CME 281; MTH 219.

**CME 398. Research & Innovation Laboratory. 1-6 Hours**

Students participate in (1) selection and design, (2) investigation and data collection, (3) analysis and (4) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.

**CME 408. Seminar. 0-1 Hours**

Presentation of lectures on contemporary chemical engineering subjects by students, faculty, and engineers in active practice. Registration required of senior students only.

**CME 409. Introduction to Polymer Science - Thermoplastics. 3 Hours**

Broad technical overview of the nature of synthetic macromolecules, including the formation of polymers and their structure, structure-property relationships, polymer characterization and processing, and applications of polymers. Fundamental topics such as viscoelasticity, the glassy state, time-temperature superposition, polymer transitions, and free volume will also be reviewed. The course focuses on thermoplastic polymers. Prerequisite(s): CHM 313, PHY 206, MTH 219.

**CME 410. High Performance Thermoset Polymers. 3 Hours**

Survey of high performance thermoset resins, focusing on chemistry, processing and properties of six general resin families: vinyl ester, epoxy, phenolic, cyanate ester, bismaleimide, and polyimides. The course will include fundamental discussions of polymerization mechanisms, network structure development, rheology and time-temperature transformation, resin toughening, and structure-processing-property relationships. Characterization techniques will also be reviewed. Prerequisite(s): CHM 313.

**CME 412. Advanced Composites. 3 Hours**

Materials and processing. Comprehensive introduction to advanced fiber reinforced polymeric matrix composites. Constituent materials and composite processing will be emphasized with special emphasis placed on structure-property relationships, the role of matrix in composite processing, mechanical behavior, and laminate processing. Specific topics will include starting materials, material forms, processing, quality assurance, test, methods, and mechanical behavior. Prerequisite(s): (CME 409 or CME 509 or MAT 501) or permission of instructor.

**CME 429. Computational Chemistry. 3 Hours**

Introduction to computational chemistry including a discussion of ab initio, semiempirical, and DFT methods and an overview of molecular mechanics and molecular simulation methods. Lectures are supplemented by simulation exercises using commercial programs such as Gaussian and Molecular Studio. Prerequisite(s): CHM 124 or permission of instructor.

**CME 430. Chemical Engineering Design I. 3 Hours**

Study of basic design concepts, safety and health issues, capital cost estimation, manufacturing cost estimation, basic economics and profitability analysis, materials of construction, materials selection and process vessel design. Prerequisite(s): CME 203.

**CME 431. Chemical Engineering Design II. 3 Hours**

Project-based study of principles of process design and economics, use of process flowsheet simulators, short-cut design procedures, process optimization, and plant layout. Prerequisite(s): CME 306, CME 365, CME 430, CME 465.

**CME 432. Chemical Product Design. 3 Hours**

Application of the design process to products based on chemical technology. Coverage of the entire design process from initial identification of product needs, to the generation and selection of product ideas, and culminating in the manufacture of a new product.

**CME 452. Process Control. 3 Hours**

Mathematical models, Laplace transform techniques, and process dynamics. Feedback control systems, hardware, and instrumentation. Introduction to frequency response, advanced techniques, and digital control systems. Prerequisite(s): CME 381.

**CME 453L. Process Control Laboratory. 2 Hours**

Team-based, project oriented study of process dynamics and digital control using computer-based data acquisition and control systems with a focus on real time process monitoring and control. Prerequisite(s): (CME 452, CME 466L) or permission of instructor.

**CME 465. Fluid Flow & Heat Transfer Processes. 3 Hours**

Fluid mechanics, transportation and metering of fluids, heat transfer and its applications. Prerequisite(s): CME 311, CME 324.

**CME 466L. Chemical Engineering Unit Operations Laboratory. 2 Hours**

Study of the equipment and utilization of various chemical engineering processes. Team based experimentation includes designing, and performing experiments on common chemical process unit operations apparatuses. After experimentation, students analyze data and compare with literature for experiment validation. Report writing and group presentations are emphasized. Prerequisite(s): CME 365. Corequisite(s): CME 465.

**CME 486. Introduction to Petroleum Engineering. 3 Hours**

Introduction to the fundamental concepts in petroleum engineering. Petroleum topics include overviews of areas such as petroleum geology, petroleum fluids and thermodynamics, drilling and completion, and production and multiphase flow. In addition this course will cover refinery operations.

**CME 489. Principles of Biology for Bioengineers. 3 Hours**

This course is designed for students with undergraduate majors in engineering or non-biological sciences. The focus of the course is to provide a common broad base of basic knowledge and terminology in the biological sciences required for coursework in the bioengineering emphasis tracts. Prerequisite(s): (BIO 151, BIO 152) or permission of instructor.

**CME 490. Introduction to Bioengineering. 3 Hours**

This class provides an introduction to bioengineering - a branch of engineering focusing on biological systems, biomaterials, engineering applications in living systems, and many other areas. By the end of this course, students will be able to understand bioengineering applications and processes, and properly apply engineering fundamentals, including transport phenomena and reaction kinetics, to these systems. Prerequisite(s): (BIO 151, CME 324 or BIE 505) or permission of instructor.

**CME 491. Biomedical Engineering I. 3 Hours**

Introduction to the fundamental concepts in biomedical engineering with a special focus on chemical engineering applications. Biomedical topics include overviews of areas such as biomaterials, tissue engineering, biosensors and biomedical engineering technology. Prerequisite(s): (BIO 151; (CHM 420 or CHM 451); CME 324, CME 365) or permission of instructor.

**CME 492. Chemical Sensors & Biosensors. 3 Hours**

Analysis performed with chemical sensors complement laboratory analyses and offer the potential for more rapid and on-line analyses in complex sample matrices. The demand for new chemical sensors, biosensors, and sensing concepts is rapidly increasing and associated with the growing need to understand and/or control complex chemical and biochemical processes or detect the presence of toxic chemical or biological agents. Prerequisite(s): Permission of instructor.

**CME 493H. Honors Thesis. 3 Hours**

Selection, design, investigation, and completion of an independent, original research study resulting in a document prepared for submission as a potential publication and a completed undergraduate thesis. Restricted to students in University Honors Program.

**CME 494H. Honors Thesis. 3 Hours**

Selection, design, investigation, and completion of an independent, original research study resulting in a document prepared for submission as a potential publication and a completed undergraduate thesis. Restricted to students in University Honors Program. Prerequisite(s): CME 493.

**CME 498. Research & Innovation Laboratory. 1-6 Hours**

Students participate in (1) selection and design, (2) investigation and data collection, (3) analysis and (4) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.

**CME 499. Special Problems in Chemical Engineering. 1-6 Hours**

Particular assignments to be arranged and approved by chairperson of the department.

## Civil and Environmental Engineering and Engineering Mechanics

Major:

- Bachelor of Civil Engineering (p. 374)

Minors:

- Engineering Mechanics (p. 375)
- Environmental Engineering (p. 375)
- Structures (p. 375)
- Transportation Engineering (p. 375)
- Water Resources Engineering (p. 376)

The Department of Civil and Environmental Engineering and Engineering Mechanics offers a broad-based curriculum leading to a Bachelor of Civil Engineering (BCE) degree. The BCE program offers sufficient elective courses to obtain a concentration in construction, environmental engineering, structures, water resources, geotechnical or transportation.

The mission of the program is to graduate broadly educated, technically competent individuals prepared for professional careers or for advanced studies.

Within the first several years following completion of the program, University of Dayton Bachelor of Civil Engineering graduates are prepared to meet the following program educational objectives:

- have successful careers in civil engineering or other professions
- pursue advanced degrees in support of their chosen profession
- conduct professional and personal endeavors in a responsible and ethical manner
- seek service and leadership roles in their profession and community
- continue their professional and personal growth through a process of life-long learning.

Civil engineering is the profession in which knowledge of the mathematical and physical sciences gained by study, experience and practice is applied with judgment to develop ways to economically utilize the materials and forces of nature in improving and protecting



the environment and providing structures and facilities for community, industry and transportation for the progressive well-being of humanity.

Civil engineers, leading users of high technology in wide-ranging applications in both the public and the private sectors, are essential to the continued improvement of society. Civil engineers can enter traditional fields such as construction, bridge and building design and analysis, highway design and traffic control, water treatment and distribution, environmental engineering, water resources and geotechnics. Their broad education however, also prepares them for materials engineering, engineering management, and the aerospace, power and automotive industries. Civil engineering has applications in conceptual and detail design, field operations, computers and consulting.

Members of the student chapters of the American Society of Civil Engineers (ASCE), Chi Epsilon, Institute of Transportation Engineers (ITE), and National Society of Professional Engineers (NSPE) have the opportunity to meet regularly with practicing engineers in the Dayton community.

### Faculty

Donald V. Chase, Chairperson

Professors Emeriti: Bogner, J. Whitney

Distinguished Service Professor: Ryckman

Professor: J. Saliba

Associate Professor: Crosson, Donaldson, Eustace, D. Taylor

Assistant Professors: Bilgin, Toubia, T. Whitney

Lecturer: Alakkad

Visiting Professor: Chase

## Bachelor of Civil Engineering (cee) minimum of 138 credit hours

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
HST 103 West and the World	
REL 103 Introduction to Religious and Theological Studies	
PHL 103 Intro To Philosophy	
ENG 100 Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>	0-3
ENG 200 Writing Seminar II	
Oral Communication	3
CMM 100 Principles of Oral Communication	
Mathematics	3
Social Science	3
Arts	3
Natural Sciences <sup>4</sup>	7
Crossing Boundaries	variable credit
Faith Traditions	
Practical Ethical Action	
Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	

### Historical Studies

Diversity and Social Justice	3
Major Capstone	0-3

- Completed with ASI 110 and ASI 120.
- Or ENG 100A and ENG 100B, or ENG 200H, by placement.
- Completed with ENG 200H or ASI 120.
- Must include two different disciplines and accompanying lab.

### Major Requirements

CEE 101	Introduction to Civil Engineering (2 semesters)	0
CEE 200	Professional Development Seminar (2 semesters)	0
CEE 213	Surveying	2
CEE 214	Highway Geometrics	2
CEE 215L	Surveying Field Practice	3
CEE 221L	Civil Computation Laboratory	2
CEE 300	Professional Development Seminar (2 semesters)	0
CEE 311 & 311L	Civil Engineering Materials and Civil Engineering Materials Laboratory	3
CEE 312 & 312L	Geotechnical Engineering and Geotechnical Engineering Laboratory	4
CEE 313 & 313L	Hydraulics and Hydraulics Laboratory	4
CEE 316	Analysis of Structures I	3
CEE 333	Water Resources Engineering	3
CEE 400	Professional Development Seminar (2 semesters)	0
CEE 403	Transportation Engineering	3
CEE 411	Design of Steel Structures	3
CEE 412	Design of Concrete Structures	3
CEE 425	Civil Engineering Systems	3
CEE 434 & 434L	Water & Wastewater Engineering and Water & Wastewater Engineering Laboratory	4
CEE 450	Civil Engineering Design <sup>1</sup>	3
CHM 123 & 123L	General Chemistry and General Chemistry Laboratory	4
CHM 124	General Chemistry	3
CMM 100	Principles of Oral Communication	3
EGM 202	Dynamics	3
EGM 303	Mechanics II	3
EGR 100	Enrichment Workshop (2 semesters)	0
EGR 103	Engineering Innovation	2
EGR 201	Engineering Mechanics	3
EGR 202	Engineering Thermodynamics	3
EGR 203	Electrical & Electronic Circuits	3
ENG 100 & ENG 200 or ENG 200H	Writing Seminar I and Writing Seminar II or Writing Seminar II	6
GEO 218	Geological Site Investigation for Engineers	3
HST 103 or HST 198	The West & the World or History Scholars' Seminar	3
HST 343	History of Civil Engineering	3
MTH 168	Analytic Geometry & Calculus I	4
MTH 169	Analytic Geometry & Calculus II	4

MTH 218	Analytic Geometry & Calculus III	4
MTH 219	Applied Differential Equations	3
PHL 103	Introduction to Philosophy	3
PHY 206	General Physics I - Mechanics	3
PHY 207	General Physics II - Electricity & Magnetism	3
REL 103	Introduction to Religious and Theological Studies	3
CEE electives <sup>3,4</sup>		9
Electives		12
Tech elective		3
Total Hours		138

<sup>1</sup> Admittance into CEE 450 requires successful completion of all required engineering courses with an average academic unit GPA of no less than 2.0, or approval of the chair.

<sup>2</sup> Three semester hours waived if accepted into ENG 200H.

<sup>3</sup> Select from list approved by the Department of Civil and Environmental Engineering and Engineering Mechanics.

<sup>4</sup> May be used to concentrate studies in the areas of construction, environmental, structures, geotechnical, transportation, and water resources engineering.

## Minor in Engineering Mechanics (eme)

This minor is open to all engineering majors. The program provides a broad treatment of engineering mechanics including theoretical, numerical and experimental topics.

Select four courses from: <sup>1</sup> 12

CEE 540	Composites Design
or EGM 540	Composite Design
EGM 303	Mechanics II
EGM 503	Introduction to Continuum Mechanics
EGM 511	Experimental Stress Analysis
EGM 533	Theory of Elasticity
EGM 546	Finite Element Analysis I
MAT 540	Composite Design
MEE 504	Fundamentals of Fluid Mechanics
Total Hours	12

<sup>1</sup> Courses selected may not be those already required for student's major.

## Minor in Environmental Engineering (eve)

This minor is open to all non-civil engineering majors. The program defines contemporary problems of pollution and identifies the technological approaches necessary to preserve the quality of our environment.

Select four courses from: <sup>1</sup> 12

CEE 390	Environmental Pollution Control <sup>2</sup>
CEE 434	Water & Wastewater Engineering <sup>3</sup>
CEE 499	Special Problems in Civil Engineering <sup>4</sup>
or CME 499	Special Problems in Chemical Engineering
CEE 560	Biological Processes in Wastewater Engineering

CEE 562	Physical & Chemical Water & Wastewater Treatment Processes
CEE 563	Hazardous Waste Engineering
or CME 563	Hazardous Waste Engineering
CEE 564	Solid Waste Engineering
CEE 574	Fundamentals of Air Pollution Engineering I
CEE 575	Fundamentals of Air Pollution Engineering II
or CME 575	Fundamentals of Air Pollution Engineering II
CEE 576	Environmental Engineering Separation Processes
CHM 341	Environmental Chemistry
EGR 330	Engineering Design & Appropriate Technology <sup>4</sup>
Total Hours	12

<sup>1</sup> Courses selected may not be those already required for student's major. It is recommended the minor include one course pertaining to water, air, and solid pollution control.

<sup>2</sup> Not permissible for CME students.

<sup>3</sup> Or CEE 595 Special Problems in Civil Engineering.

<sup>4</sup> No more than three credit hours of EGR 330, CEE 499, or other special project coursework may be applied to this minor. Subject to approval of the CEE chairperson within two weeks of the start of the semester.

## Minor in Structures (str)

This minor is open to all non-civil engineering majors. The program provides a broad coverage of general concepts of structural design as applied to buildings, mechanical systems and machinery.

Select four courses from: 12

CEE 311	Civil Engineering Materials & 311L
	and Civil Engineering Materials Laboratory
CEE 316	Analysis of Structures I
CEE 411	Design of Steel Structures
CEE 412	Design of Concrete Structures
CEE 500	Adv Struct Analysis
CEE 501	Struct. Analysis by Computer
CEE 502	Prestressed Concrete
CEE 504	Structural Dynamics
CEE 505	Plastic Design in Steel
CEE 507	Masonry Design
CEE 508	Design Timber Struc
CEE 524	Foundation Engr
CEE 540	Composites Design
Total Hours	12

## Minor in Transportation Engineering (tre)

This minor is open to all non-civil engineering majors. The program provides broad coverage in the planning, design, operations and management of the transportation system.

Select four courses from: <sup>1</sup> 12

CEE 403	Transportation Engineering
CEE 515	Pavement Engineering
CEE 550	Hghwy Geometrc Dsgn

CEE 551	Traffic Engineering
CEE 552	Intelligent Transportation Sys
CEE 553	Travel Demand Mdlng
CEE 554	Urban Public Trnsprtn
CEE 555	Hgwy Traffic Safety
CEE 558	Traffic Engr Rsrch
CEE 595	Special Problems in Civil Engineering
<hr/>	
Total Hours	12

<sup>1</sup> Courses selected may not be those already required for student's major.

Minor in Water Resources Engineering (wre)

This minor is open to all non-civil engineering majors. The program provides broad coverage to the general concepts used in water resources engineering including hydraulics and hydrology issues within economic, optimization, operation and management frameworks.

Select four courses from: <sup>1</sup>		12
CEE 313	Hydraulics	
CEE 333	Water Resources Engineering	
CEE 580	Hydrology & Seepage	
CEE 582	Adv Hydraulics	
CEE 584	Open Channel Flow	
CEE 595	Special Problems in Civil Engineering	
Total Hours		12

<sup>1</sup> Courses selected may not be those already required for student's major.

First Year		
Fall	Hours Spring	Hours
EGR 100	0 EGR 100	0
HST 103 (Satisfies CAP First-Year Humanities Common)	3 CMM 100	3
PHY 206 (Satisfies CAP Natural Science)	3 EGR 201	3
MTH 168 (Satisfies CAP Math Requirement)	4 MTH 169	4
PHL 103 (Satisfies CAP First-Year Humanities Common)	3 REL 103 (Satisfies CAP First Year Humanities Common)	3
CEE 101	0 CEE 101	0
EGR 103	2 CHM 123 (Satisfies CAP Natural Science)	3
ENG 100 (Satisfies CAP Writing Seminar)	3 CHM 123L (Satisfies CAP Natural Science)	1
18		17

Second Year		
Fall	Hours Spring	Hours
CEE 221L	2 GEO 218 (Satisfies CAP Crossing Boundaries & Inquiry )	3

PHY 207	3 EGM 303	3
EGM 202	3 EGR 202	3
MTH 218	4 MTH 219	3
CEE 213	2 CEE 214	2
CEE 200	0 CEE 200	0
CHM 124	3 ENG 200 (Satisfies CAP Second Year Writing Seminar)	3
CEE 215L (SUMMER)		3
17		20

Third Year		
Fall	Hours Spring	Hours
CEE 300	0 CEE 300	0
CEE 313 & 313L	4 CEE 311 & 311L	3
CEE 316	3 CEE 312 & 312L	4
CEE 403	3 CEE 333	3
EGR 203	3 CEE 411	3
Advanced PHL Ethics (Satisfies CAP Crossing Boundaries and Practical Ethical Action)	3 CEE 425	3
16		16

Fourth Year		
Fall	Hours Spring	Hours
CEE 400	0 CEE 400	0
CEE 412	3 CEE 450 (Satisfies CAP Capstone Requirement)	3
CEE 434 & 434L	4 CEE/TECH Elective	3
CEE Elective	3 CEE Elective	3
CEE Elective	3 Social Science (Satisfies CAP Social Science)	3
Advanced REL (Satisfies CAP Crossing Boundaries Faith Traditions, Diversity and Social Justice)	3 HST 343 (Satisfies CAP Crossing Boundaries, Advanced History)	3
Art Study (Satisfies CAP Art Study)		3
16		18

Total credit hours: 138

Civil Environmental Engr Courses

**CEE 101. Introduction to Civil Engineering. 0-1 Hours**  
Introduction to the civil engineering faculty, facilities, and curriculum; to the career opportunities offered by the civil engineering profession; and to the areas of specialization within civil engineering.

**CEE 198. Research & Innovation Laboratory. 1,6 Hours**

Students participate in (1) selection and design, (2) investigation and data collection, (3) analysis and (4) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.

**CEE 200. Professional Development Seminar. 0 Hours**

Presentations on contemporary and professional engineering subjects by students, faculty, and engineers in active practice. The seminar addresses topics in key areas that complement traditional courses and prepare distinctive graduates, ready for life and work. Registration required for all sophomore students.

**CEE 213. Surveying. 2 Hours**

Theory of measurements, computation, and instrumentation. Boundary and construction surveys, triangulation, and level net adjustments. First term, each year. Corequisite(s): MTH 168.

**CEE 214. Highway Geometrics. 2 Hours**

Study of circular and spiral curves, vertical curves, grade lines, earthwork and mass diagram, slope and grade stakes, and contour grading. Second term, each year. Prerequisite(s): CEE 213.

**CEE 215L. Surveying Field Practice. 3 Hours**

Field work and computation in topography, highway surveying, triangulation, level net, evaluation of errors, and preparation of plans. Five eight-hour days a week for three weeks. Summer, each year. Prerequisite(s): CEE 214.

**CEE 221L. Civil Computation Laboratory. 2 Hours**

Introduction to numerical methods and logical problem solving techniques commonly used in the civil engineering profession. Introduction to computer aided drawing and design and the use of popular CADD packages in the civil engineering profession.

**CEE 298. Research & Innovation Laboratory. 1-6 Hours**

Students participate in (1) selection and design, (2) investigation and data collection, (3) analysis and (4) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.

**CEE 300. Professional Development Seminar. 0 Hours**

Practice in the presentation and discussion of papers; lectures by staff and prominent engineers. Attendance required of all civil engineering juniors.

**CEE 311. Civil Engineering Materials. 2 Hours**

Physical and mechanical properties of construction materials; Portland cement concrete, bituminous materials, wood, ferrous and non-ferrous metals, masonry units; proportioning of concrete mixtures including admixtures. Prerequisite(s): EGM 303. Corequisite(s): CEE 311L.

**CEE 311L. Civil Engineering Materials Laboratory. 1 Hour**

Laboratory experiments in the physical and mechanical properties of construction materials; Portland cement concrete, bituminous materials, wood, ferrous and non-ferrous metals, and masonry units; proportioning of concrete mixtures including admixtures. Corequisite(s): CEE 311.

**CEE 312. Geotechnical Engineering. 3 Hours**

Principles of soil structures, classification, capillarity, permeability, flow nets, shear strength, consolidation, stress analysis, slope stability, lateral pressure, bearing capacity, and piles. Second term, each year. Prerequisite(s): CEE 313; EGM 303. Corequisite(s): CEE 312L; GEO 218.

**CEE 312L. Geotechnical Engineering Laboratory. 1 Hour**

Laboratory tests to evaluate and identify soil properties for engineering purposes. Design problems are also included. Second term, each year. Corequisite(s): CEE 312.

**CEE 313. Hydraulics. 3 Hours**

Basic principles of fluid mechanics in closed conduits and open channels. Principles include fluid statics, conservation of mass, conservation of momentum, conservation of energy, and fluid dynamics. Presentation of fluid mechanics principles through the solution of practical problems and a comprehensive semester project. Prerequisite(s): EGM 202. Corequisite(s): CEE 313L.

**CEE 313L. Hydraulics Laboratory. 1 Hour**

Laboratory experiments and problems associated with CEE 313. Corequisite(s): CEE 313.

**CEE 316. Analysis of Structures I. 3 Hours**

Elastic analysis of structures; deflection, moment-area theorems; conjugate-beam; virtual work influence lines; analysis of indeterminate structures using force methods; theories of failure, stiffness matrices, and use of software to analyze structures. Prerequisite(s): EGM 303.

**CEE 317. Analysis of Structures II. 3 Hours**

Elastic analysis of structures; virtual work; Castigliano's theorems; slope deflection and moment distribution; computer analysis of structural systems, influence lines, column analogy, limit analysis. Departmental elective. Prerequisite(s): CEE 316.

**CEE 333. Water Resources Engineering. 3 Hours**

Integrated study of the principles of water movement and management. Focus areas include hydrology, water distribution, storm water management, and waste water collection. Second semester, each year. Prerequisite(s): CEE 313.

**CEE 390. Environmental Pollution Control. 3 Hours**

Study of environmental pollution problems relating to air, water, and land resources. Causes and effects of pollution technology for solving problems. Legal and political considerations. For juniors and seniors other than civil engineering students. Credit may not be applied toward civil engineering degree. Prerequisite(s): Some knowledge of chemistry.

**CEE 398. Research & Innovation Laboratory. 1-6 Hours**

Students participate in (1) selection and design, (2) investigation and data collection, (3) analysis and (4) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.

**CEE 400. Professional Development Seminar. 0 Hours**

Practice in the presentation and discussion of papers; lectures by staff and prominent engineers. Attendance required of all civil engineering seniors.

**CEE 403. Transportation Engineering. 3 Hours**

Fundamentals of transportation engineering, including design, construction, maintenance, and economics of transportation facilities. Design of pavement structures and drainage systems. Prerequisite(s): CEE 214.

**CEE 411. Design of Steel Structures. 3 Hours**

Design and behavior of structural steel connections, columns, beams, and beams subjected to tension, compression, bending, shear, torsion, and composite action. Second semester, each year. Prerequisite(s): CEE 316.

**CEE 412. Design of Concrete Structures. 3 Hours**

Design and behavior of reinforced concrete slabs, beams, columns, walls, and footings subjected to tension, compression, bending, shear, and torsion. First semester, each year. Prerequisite(s): CEE 311, CEE 316.

**CEE 421. Construction Engineering. 3 Hours**

Organization, planning, and control of construction projects, including a study of the use of machinery, economics of equipment, methods, materials, estimates, cost controls, and fundamentals of CPM and PERT contracts and bonds and legal aspects of contracting. Departmental elective.

**CEE 422. Design & Construction Project Management. 3 Hours**

Fundamentals of project management as they relate to the design and construction professional, and the application of project management techniques to the design and construction of major projects. Departmental elective.

**CEE 425. Civil Engineering Systems. 3 Hours**

Analysis and evaluation of civil engineering systems using operations research tools including systems modeling, optimization and probability, and statistics. Civil engineering systems will also be examined from an economic perspective. Prerequisite(s): Junior or senior status.

**CEE 434. Water & Wastewater Engineering. 3 Hours**

Problems of water pollution; development and design of public water supply and waste water treatment systems; legal, political, ethical, and moral considerations. First term, each year. Prerequisite(s): CHM 124. Corequisite(s): CEE 313, CEE 434L.

**CEE 434L. Water & Wastewater Engineering Laboratory. 1 Hour**

Laboratory exercises, demonstrations, and design problems associated with water and wastewater engineering. First semester, each year. Corequisite(s): CEE 434.

**CEE 450. Civil Engineering Design. 3 Hours**

Group design of complete projects, drawing on the knowledge acquired in a spectrum of civil engineering subjects. Second semester, each year. Prerequisite(s): CEE 312, CEE 333, CEE 403, CEE 411, CEE 412, CEE 434.

**CEE 463. Hazardous Waste Treatment. 3 Hours**

The fundamental principles of the design and operation of hazardous waste control and hazardous substances remediation processes. Hazardous waste regulations, risk assessment, and management. Department Elective. Prerequisite(s): CHM 124.

**CEE 493H. Honors Thesis. 3 Hours**

Selection, design, investigation, and completion of an independent, original research study resulting in a document prepared for submission as a potential publication and a completed undergraduate thesis. Restricted to students in University Honors Program.

**CEE 494H. Honors Thesis. 3 Hours**

Selection, design, investigation, and completion of an independent, original research study resulting in a document prepared for submission as a potential publication and a completed undergraduate thesis. Restricted to students in University Honors Program. Prerequisite(s): CEE 493.

**CEE 498. Research & Innovation Laboratory. 1-6 Hours**

Students participate in (1) selection and design, (2) investigation and data collection, (3) analysis and (4) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.

**CEE 499. Special Problems in Civil Engineering. 1-6 Hours**

Particular assignments to be arranged and approved by chairperson of the department. Departmental elective.

## Engineering Mechanics Courses

**EGM 202. Dynamics. 3 Hours**

Kinematics, including translation, rotation, plane motion, and relative motion; kinetics of particles and bodies by the methods of force-mass-acceleration, work-energy, and impulse-momentum. Each semester, each year. Prerequisite(s): EGR 201.

**EGM 303. Mechanics II. 3 Hours**

The study of stresses, strains, and deflections in tension, compression, shear, flexure, and torsion; shear and moment diagrams; analysis of stresses and strains at a point; Mohr's circle; analysis of columns. Each semester, each year. Prerequisite(s): EGR 201.

**EGM 304. Advanced Strength of Materials. 3 Hours**

Stresses and strains at a point; shear center; unsymmetrical bending; curved beams; flat plates; torsion of noncircular bars; beams on elastic support; buckling; introduction to mechanics of composite materials. First and second terms each year. Prerequisite(s): EGM 303.

**EGM 499. Special Problems in Engineering Mechanics. 1-6 Hours**

Particular assignments to be arranged and approved by chairperson of the department.

## Electrical and Computer Engineering

Majors:

- Bachelor of Electrical Engineering (p. 379)
- Bachelor of Science in Computer Engineering (p. 380)

Concentrations:

- Electrical Energy Systems (p. 381)
- Electro-Optics (p. 381)
- Robotics (p. 382)

Minors:

- Computer Systems (p. 382)
- Signals and Systems (p. 382)

The Department of Electrical and Computer Engineering offers two ABET accredited undergraduate programs leading to the Bachelor of Electrical Engineering and the Bachelor of Science in Computer Engineering. The department offers masters and doctoral degrees in electrical engineering and is closely coupled to the graduate program in electro-optics where both master's and doctoral degrees are offered. The electrical and computer engineering department offers an accelerated 5 year B.S. - M.S. program, where students completing their baccalaureate degree can attain their Master of Science in Electrical



Engineering within one additional year. The department also offers an undergraduate concentration in electro-optics, in collaboration with the Physics Department and the Electro-Optics Program. An Undergraduate concentration in Robotics is available for both Electrical and Computer Engineering majors beginning in Fall 2011. A new undergraduate concentration in Electrical Engineering Systems is also available beginning in Fall 2012.

The mission of the Department of Electrical and Computer Engineering is to develop in students the skills and knowledge to learn, lead and serve in their profession and their community.

Our electrical engineering alumni will be prepared to:

1. find rewarding careers as engineering professionals. As electrical engineers they will be prepared to design and develop new products, technologies and processes that incorporate one or more of the following elements: analog and digital circuits, signals and systems, propagation and processing of signals, and control systems.
2. continue their professional education either formally, in graduate school, professional schools, or through industrial training programs; or informally, through activities such as continuing education, attendance in short courses, professional workshops and conferences.
3. exercise and further develop their skills in professional communication through activities such as project briefings, conference presentations, technical reports and manuals, and journal publications.
4. participate in activities for the betterment of society, and carry on the traditions of the University of Dayton by maintaining high ethical standards in their professional activities, and by serving their country and community through service, leadership and mentoring.

Our computer engineering alumni will be prepared to:

1. find rewarding careers as engineering professionals. As computer engineers they will be prepared to design and develop new products, technologies and processes that incorporate one or more of the following elements: analog and digital circuits, signals and systems, computer design, software development, and hardware/software integration.
2. continue their professional education either formally, in graduate school, professional schools, or through industrial training programs; or informally, through activities such as continuing education, attendance in short courses, professional workshops and conferences.
3. exercise and further develop their skills in professional communication through activities such as project briefings, conference presentations, technical reports and manuals, and journal publications.
4. participate in activities for the betterment of society, and carry on the traditions of the University of Dayton by maintaining high ethical standards in their professional activities, and by serving their country and community through service, leadership and mentoring.

Electrical engineering is an exciting field within the engineering discipline. It offers the opportunity to enter some of the most rewarding and challenging careers available. The explosion of capabilities in the computer, communication, automotive, medical, entertainment and aerospace industries, as well as homeland security has resulted from advances in the electronics field. Electrical engineers are equipped to enter this dynamic arena as well as equally challenging and rewarding

careers in the fields of electro-optics, communication, radar, signal and image processing, biomedicine, controls, robotics and instrumentation, and many more. Electrical engineers work in all phases of technological programs. They are involved from the conception of the basic ideas through design, fabrication, verification, manufacturing and marketing of the final product.

Computer engineering represents perhaps the most sought-after professional component of an engineering team which develops the technological possibilities inherent in the design, construction and operation of computer systems. The computer engineer performs a wide variety of tasks involving hardware, software, peripherals, computer-controlled systems and hardware-software integration, as well as computer applications in the multitude of areas listed in the previous paragraph.

Both electrical engineering and computer engineering are broad-based engineering disciplines that provide for a wide range of career choices within the engineering field as well as providing an excellent basis for careers in such diverse areas as business, law and medicine.

The electrical engineering curriculum is designed to provide an understanding of basic electrical engineering principles with emphasis on the development of problem solving skills. The computer engineering curriculum draws from software courses taken in computer science and hardware related courses taken from Electrical and Computer Engineering, culminating in the integration of hardware and software in systems design. An extensive laboratory experience is integrated with the classroom work to assure that the student develops a working knowledge of the fundamentals. Upper level courses integrate the knowledge base with current technology and computational tools resulting in a graduate capable of making a contribution to the engineering profession by either entering the work force or pursuing a graduate education.

## Faculty

Guru Subramanyam, Chairperson

Professors Emeriti: Evers, Kee, Rogers, Scarpino, Thiele, Williamson  
Professors: Asari, Banerjee, Chatterjee, Duncan, Hardie, Haus, Moon, Ordonez, Sarangan, Subramanyam, Vorontsov, Weber, Wicks, Zhan  
Associate Professors: Balster, Daniels, Gulians, Loomis, Penno, Taha  
Assistant Professors: Hirakawa  
Adjunct Professors: Barrera, Coutu, Kessler, Kim, Malas, Patterson, Wang

## Bachelor of Electrical Engineering (ele) minimum of 134 credit hours

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>		12
HST 103	West and the World	
REL 103	Introduction to Religious and Theological Studies	
PHL 103	Intro To Philosophy	
ENG 100	Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>		0-3
ENG 200	Writing Seminar II	
Oral Communication		3
CMM 100	Principles of Oral Communication	
Mathematics		3

Social Science	3	EGR 201	Engineering Mechanics	3
Arts	3	EGR 202	Engineering Thermodynamics	3
Natural Sciences <sup>4</sup>	7	EGR 203	Electrical & Electronic Circuits	3
Crossing Boundaries	variable credit	ENG 100 & ENG 200 or ENG 200H	Writing Seminar I and Writing Seminar II Writing Seminar II	6
Faith Traditions		HST 103 or HST 198	West and the World History Scholars' Seminar	3
Practical Ethical Action		MTH 168	Analytic Geometry & Calculus I	4
Inquiry		MTH 169	Analytic Geometry & Calculus II	4
Integrative		MTH 218	Analytic Geometry & Calculus III	4
Advanced Study	variable credit	MTH 219	Applied Differential Equations	3
Philosophy and/or Religious Studies		MTH 310	Linear Algebra & Matrices	3
Historical Studies		PHL 103	Intro To Philosophy	3
Diversity and Social Justice	3	PHL 316 or PHL 319	Engineering Ethics Information Ethics	3
Major Capstone	0-3	PHY 206	General Physics I - Mechanics	3
		PHY 210L	General Physics Laboratory	1
		PHY 232	The Physics of Waves	3
		REL 103	Introduction to Religious and Theological Studies	3
		Electives		12
		Technical electives <sup>1</sup>		12
		Total Hours		135

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

#### Major Requirements

CHM 123	General Chemistry	3
CMM 100	Principles of Oral Communication	3
CPS 150	Algorithms & Programming I	4
ECE 101	Introduction to Electrical & Computer Engineering (2 semesters)	0
ECE 200	Professional Development Seminar (2 semesters)	0
ECE 201L	Circuit Analysis Laboratory	1
ECE 203	Introduction to MATLAB Programming	1
ECE 204 & 204L	Electronic Devices and Electronic Devices Laboratory	4
ECE 215 & 215L	Introduction to Digital Systems and Digital Systems Laboratory	4
ECE 303 & 303L	Signals & Systems and Signals & Systems Laboratory	4
ECE 304 & 304L	Electronic Systems and Electronic Systems Laboratory	4
ECE 314 & 314L	Fundamentals of Computer Architecture and Fundamentals of Computer Architecture Laboratory	4
ECE 332	Electromagnetics	3
ECE 333	Applied Electromagnetics	3
ECE 334	Discrete Signals & Systems	3
ECE 340	Engineering Probability & Random Processes	3
ECE 401 & 401L	Communication Systems and Communication Systems Laboratory	4
ECE 415	Control Systems	3
ECE 431L	Multidisciplinary Engineering Design Laboratory I	2
ECE 432L	Multidisciplinary Design II	3
ECE 433	Project Management & Innovation	1
EGR 100	Enrichment Workshop (2 semesters)	0
EGR 103	Engineering Innovation	2

<sup>1</sup> Select from list approved by the Department of Electrical and Computer Engineering.

## Bachelor of Science in Computer Engineering (cpe) minimum of 137 credit hours

#### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
HST 103	West and the World
REL 103	Introduction to Religious and Theological Studies
PHL 103	Intro To Philosophy
ENG 100	Writing Seminar I <sup>2</sup>
Second-Year Writing Seminar <sup>3</sup>	0-3
ENG 200	Writing Seminar II
Oral Communication	3
CMM 100	Principles of Oral Communication
Mathematics	3
Social Science	3
Arts	3
Natural Sciences <sup>4</sup>	7
Crossing Boundaries	variable credit
Faith Traditions	
Practical Ethical Action	
Inquiry	
Integrative	

Advanced Study	variable
	credit
Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

- <sup>1</sup> Completed with ASI 110 and ASI 120.
- <sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.
- <sup>3</sup> Completed with ENG 200H or ASI 120.
- <sup>4</sup> Must include two different disciplines and accompanying lab.

### Major Requirements

CHM 123	General Chemistry	3
CMM 100	Principles of Oral Communication	3
CPS 150	Algorithms & Programming I	4
CPS 151	Algorithms & Programming II	4
CPS 346	Operating Systems I	3
CPS 350	Data Structures & Algorithms	3
CPS 444	UNIX/Linux Programming	3
ECE 101	Introduction to Electrical & Computer Engineering (2 semesters)	0
ECE 200	Professional Development Seminar (2 semesters)	0
ECE 201L	Circuit Analysis Laboratory	1
ECE 203	Introduction to MATLAB Programming	1
ECE 204 & 204L	Electronic Devices and Electronic Devices Laboratory	4
ECE 215 & 215L	Introduction to Digital Systems and Digital Systems Laboratory	4
ECE 303 & 303L	Signals & Systems and Signals & Systems Laboratory	4
ECE 304 & 304L	Electronic Systems and Electronic Systems Laboratory	4
ECE 314 & 314L	Fundamentals of Computer Architecture and Fundamentals of Computer Architecture Laboratory	4
ECE 334	Discrete Signals & Systems	3
ECE 340	Engineering Probability & Random Processes	3
ECE 431L	Multidisciplinary Engineering Design Laboratory I	2
ECE 432L	Multidisciplinary Design II	3
ECE 433	Project Management & Innovation	1
ECE 444	Advanced Digital Design	3
ECE 449	Computer Systems Engineering	3
EGR 100	Enrichment Workshop (2 semesters)	0
EGR 103	Engineering Innovation	2
EGR 201	Engineering Mechanics	3
EGR 202	Engineering Thermodynamics	3
EGR 203	Electrical & Electronic Circuits	3
ENG 100 & ENG 200 or ENG 200H	Writing Seminar I and Writing Seminar II or Writing Seminar II	6
HST 103 or HST 198	The West & the World or History Scholars' Seminar	3

MTH 168	Analytic Geometry & Calculus I	4
MTH 169	Analytic Geometry & Calculus II	4
MTH 218	Analytic Geometry & Calculus III	4
MTH 219	Applied Differential Equations	3
MTH 310	Linear Algebra & Matrices	3
PHL 103	Introduction to Philosophy	3
PHL 319	Information Ethics	3
PHY 206	General Physics I - Mechanics	3
PHY 210L	General Physics Laboratory	1
PHY 232	The Physics of Waves	3
REL 103	Introduction to Religious and Theological Studies	3
Computer Science elective		3
Electives		12
Technical electives <sup>1</sup>		6
Total Hours		138

- <sup>1</sup> Select from list approved by the Department of Electrical and Computer Engineering.

## CONCENTRATION IN Electrical Energy Systems (ENS)

The Electrical Energy Systems Concentration will prepare our Electrical and Computer Engineering students in all aspects of Electrical Energy Systems including generation, transmission, distribution, utilization, storage, as well as enabling technologies for the smart grid.

Required ECE courses:

ECE 316 or ECE 499	Introduction to Electrical Energy Systems or Special Problems in Electrical & Computer Engineering	3
ECE 414	Electromechanical Devices	3
ECE 471	Contemporary Power Systems & the Smart Grid	3
Select one course from:		3
ECE 472	Smart Grid Technologies	
MEE 473	Renewable Energy Systems	
Total Hours		12

## Concentration in Electro-Optics (eop)

The departments of Electrical and Computer Engineering and Physics, with the support of the Electro-Optics Graduate Program at University of Dayton, offers an undergraduate concentration in Electro-Optics. This multidisciplinary concentration is open to Electrical Engineering, Computer Engineering and Physics undergraduates with appropriate prerequisite background. This concentration will enable students to pursue new coop opportunities and possible careers in photonics, and better prepare students to pursue new coop opportunities and possible careers in photonics and better prepare students who wish to pursue graduate degrees in the area of optics. All the courses listed below are approved as free technical electives for ECE undergraduate students.

ECE 443	Introduction to Electro-Optics	3
PHY 404	Physical Optics	3
Select two courses from:		6
EOP 501	Geometric Optics	

EOP 502	Optical Radiation & Matter	
EOP 505	Introduction to Lasers	
EOP 506/ECE 573	Electro-Optical Devices & Systems	
EOP 513/ECE 572	Linear Systems & Fourier Optics	
EOP 514/ECE 574	Guided-Wave Optics	
Total Hours		12

## Concentration in Robotics (rob)

<b>Robotics (CPE Majors)</b>		15
ECE 415	Control Systems	3
ECE 416	Introduction to Industrial Robotic Manipulators	3
ECE 447	Digital Control Systems	3
Select two courses from:		6
CPS 480	Artificial Intelligence	
ECE 414	Electromechanical Devices	
ECE 444	Advanced Digital Design	
ECE 445	Signal Processing	
MEE 321	Theory of Machines	
MEE 434	Mechatronics	
MEE 438	Robotics & Flexible Manufacturing	
<b>Robotics (ELE Majors)</b>		12
ECE 416	Introduction to Industrial Robotic Manipulators	3
ECE 447	Digital Control Systems	3
Select two courses from:		6
CPS 480	Artificial Intelligence	
ECE 414	Electromechanical Devices	
ECE 444	Advanced Digital Design	
ECE 445	Signal Processing	
MEE 321	Theory of Machines	
MEE 434	Mechatronics	
MEE 438	Robotics & Flexible Manufacturing	

## Minor in Computer Systems (cos)

This minor is open to chemical, civil and mechanical engineering majors, and other students with appropriate prerequisite background who receive permission from the ECE Department Chair. The program builds strength in the area of computer systems and digital design, with emphasis on computer hardware.

<b>Computer Systems (non-MEE majors)</b>		16
CPS 150	Algorithms & Programming I	4
or ECE 444	Advanced Digital Design	
ECE 201L	Circuit Analysis Laboratory	1
ECE 215 & 215L	Introduction to Digital Systems and Digital Systems Laboratory	4
ECE 314 & 314L	Fundamentals of Computer Architecture and Fundamentals of Computer Architecture Laboratory	4
EGR 203	Electrical & Electronic Circuits	3
<b>Computer Systems (MEE majors)</b>		15
CPS 150	Algorithms & Programming I (or equivalent)	4

ECE 215 & 215L	Introduction to Digital Systems and Digital Systems Laboratory	4
ECE 314 & 314L	Fundamentals of Computer Architecture and Fundamentals of Computer Architecture Laboratory	4
ECE 444	Advanced Digital Design	3

## Minor in Signals and Systems (sas)

This minor is open to chemical, civil and mechanical engineering majors, and other students with appropriate prerequisite background who receive permission from the ECE Department Chair. The program provides the essential background in signals and systems theory including continuous and discrete systems. An advanced course is selected by the students to allow them to specialize in controls or signal processing.

ECE 201L	Circuit Analysis Laboratory	1
ECE 203	Introduction to MATLAB Programming	1
ECE 303 & 303L	Signals & Systems and Signals & Systems Laboratory	4
ECE 334	Discrete Signals & Systems	3
ECE 415	Control Systems	3
or ECE 445	Signal Processing	
EGR 203	Electrical & Electronic Circuits	3
Total Hours		15

## Electrical Engineering

### First Year

Fall	Hours Spring	Hours
ECE 101	0 ECE 101	0
PHY 206 (Satisfies CAP Natural Science)	3 CHM 123 (Satisfies CAP Natural Science)	3
MTH 168 (Satisfies CAP Math Requirement)	4 CPS 150	4
HST 103 (Satisfies CAP First Year Humanities Common)	3 EGR 100	0
PHL 103 (Satisfies CAP First Year Humanities Common)	3 MTH 169	4
ENG 100 (Satisfies CAP Writing Seminar)	3 CMM 100 (Satisfies CAP Communication)	3
EGR 100	0 REL 103 (Satisfies CAP First Year Humanities Common)	3
EGR 103	2	
	<b>18</b>	<b>17</b>

### Second Year

Fall	Hours Spring	Hours
ECE 200	0 ECE 200	0
PHY 210L	1 PHY 232 (Satisfies CAP Crossing Boundaries Inquiry)	3
ECE 203	1 ECE 215	3
EGR 201	3 ECE 215L	1
MTH 218	4 MTH 219	3

EGR 203	3	ECE 204	3	PHY 206 (Satisfies CAP	3		
ECE 201L		1 ECE 204L	1	Natural Science)			
ENG 200 (Satisfies CAP		3 EGR 202	3		<b>18</b>		<b>17</b>
Second Year Writing				<b>Second Year</b>			
Seminar)				<b>Fall</b>	<b>Hours Spring</b>		<b>Hours</b>
	<b>16</b>		<b>17</b>	ENG 200 (Satisfies CAP	3 EGR 201		3
<b>Third Year</b>				Second Year Writing			
<b>Fall</b>	<b>Hours Spring</b>		<b>Hours</b>	Seminar)			
ECE 332	3 ECE 333		3	CPS 151	4 CPS 350		3
ECE 314	3 ECE 340		3	PHY 210L	1 ECE 215		3
ECE 314L	1 ECE 334		3	ECE 200	0 ECE 215L		1
MTH 310	3 ECE 304		3	MTH 218	4 MTH 219		3
ECE 303	3 ECE 304L		1	EGR 203	3 ECE 204		3
ECE 303L	1 Social Science (Satisfies		3	ECE 201L	1 ECE 204L		1
	CAP Social Science)			ECE 203	1 ECE 200		0
Art Study (Satisfies CAP Art	3				<b>17</b>		<b>17</b>
Study)				<b>Third Year</b>			
	<b>17</b>		<b>16</b>	<b>Fall</b>	<b>Hours Spring</b>		<b>Hours</b>
<b>Fourth Year</b>				Art Study (Satisfies CAP Art	3 Social Science (Satisfies		3
<b>Fall</b>	<b>Hours Spring</b>		<b>Hours</b>	Study)	CAP Social Science)		
TECH Elective	3 TECH Elective		3	CPS 346	3 EGR 202		3
TECH Elective	3 TECH Elective		3	ECE 314	3 ECE 340		3
ECE 415	3 ECE 432L		3	ECE 314L	1 PHY 232 (Satisfies CAP		3
ECE 431L	2 ECE 433		1		Crossing Boundaries		
ECE 401	3 Advanced REL (Satisfies		3		Inquiry)		
	CAP Crossing Boundaries			MTH 310	3 Advanced PHL Ethics		3
	Faith Traditions, Diversity				(Satisfies CAP Crossing		
	and Social Justice)				Boundaries and Practical		
ECE 401L	1 Advanced PHL Ethics		3		Ethical Action)		
	(Satisfies CAP Crossing			ECE 303	3 ECE 334		3
	Boundaries and Practical			ECE 303L	1		
	Ethical Action)				<b>17</b>		<b>18</b>
Advanced HST (Satisfies	3			<b>Fourth Year</b>			
CAP Crossing Boundaries)				<b>Fall</b>	<b>Hours Spring</b>		<b>Hours</b>
	<b>18</b>		<b>16</b>	ECE 444	3 ECE 449		3

Total credit hours: 135

## Computer Engineering

<b>First Year</b>							
<b>Fall</b>	<b>Hours Spring</b>		<b>Hours</b>				
ECE 101	0 CMM 100 (Satisfies CAP		3	ECE 304	3 ECE 433		1
	Communication)			ECE 304L	1 Advanced REL (Satisfies		3
ENG 100 (Satisfies CAP	3 CPS 150		4		CAP Crossing Boundaries		
Writing Seminar)					Faith Traditions, Diversity		
HST 103 (Satisfies CAP	3 REL 103 (Satisfies CAP		3	ADV HST (Satisfies CAP	3		
First Year Humanities	First Year Humanities			Crossing Boundaries			
Common)	Common)			Advanced History			
PHL 103 (Satisfies CAP	3 ECE 101		0	Integrative)			
First Year Humanities					<b>18</b>		<b>16</b>
Common)							
MTH 168 (Satisfies CAP	4 MTH 169		4				
Math Requirement)							
EGR 103	2 CHM 123 (Satisfies CAP		3				
	Natural Science)						
EGR 100	0 EGR 100		0				

Total credit hours: 138



## Courses

### **ECE 101. Introduction to Electrical & Computer Engineering. 0 Hours**

Introduction to electrical and computer engineering faculty, facilities, and curriculum. Career opportunities in electrical and computer engineering and areas of specialization are discussed.

### **ECE 198. Multidisciplinary Research & Innovation Laboratory. 1-6 Hours**

Students participate in 1.) selection and design, 2.) investigation and data collection, 3.) analysis, and 4.) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming, and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.

### **ECE 200. Professional Development Seminar. 0 Hours**

Presentations on contemporary and professional engineering subjects by students, faculty, and engineers in active practice. The seminar addresses topics in key areas that complement traditional courses and prepare distinctive graduates, ready for life and work. Registration required for all sophomore students.

### **ECE 201L. Circuit Analysis Laboratory. 1 Hour**

Laboratory course stressing experimental techniques, laboratory reporting, safety, and instrumentation. Experimental investigation of basic steady-state and transient circuits. Corequisite(s): ECE 201 or EGR 203.

### **ECE 203. Introduction to MATLAB Programming. 1 Hour**

MATLAB system and development environment, vector and matrix operations using MATLAB, linear algebra and calculus using MATLAB, MATLAB graphics, flow control, symbolic math toolbox. Prerequisite(s): (CPS 132 or CPS 150) or equivalent.

### **ECE 204. Electronic Devices. 3 Hours**

Study of the terminal characteristics of electronic devices and basic single stage amplifier configurations using bipolar junction transistors and field-effect transistors. Analysis of the devices includes a qualitative physical description, volt-ampere curves, and the development of small- and large-signal equivalent circuit models. Prerequisite(s): EGR 203. Corequisite(s): ECE 204L.

### **ECE 204L. Electronic Devices Laboratory. 1 Hour**

Laboratory investigation of electronic devices: diodes, bipolar junction transistors, field-effect transistors and operational amplifiers. Corequisite(s): ECE 204.

### **ECE 215. Introduction to Digital Systems. 3 Hours**

Introduction to binary systems, logic circuits, Boolean algebra, simplification methods, combinational circuits and networks, programmable logic devices, flip flops, registers, counters, memory elements, and analysis and design of sequential circuits. Prerequisite(s): EGR203, ECE201, or instructor approval. Corequisite(s): ECE 215L.

### **ECE 215L. Digital Systems Laboratory. 1 Hour**

Laboratory investigation of digital logic circuits and systems covered in ECE 215. Logic gate characteristics; combinational logic design and analysis; latches and flip-flops; synchronous and asynchronous sequential logic; simple digital systems. Experiments include design and analysis of digital systems using breadboarding, FPGA boards, modeling and simulation tools, hardware description languages, and logic synthesis tools. Prerequisite(s): ECE 201, ECE 201L. Corequisite(s): ECE 215.

### **ECE 298. Multidisciplinary Research & Innovation Laboratory. 1-6 Hours**

Students participate in 1.) selection and design, 2.) investigation and data collection, 3.) analysis, and 4.) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming, and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.

### **ECE 303. Signals & Systems. 3 Hours**

Mathematical framework associated with the analysis of linear systems including signal representation by orthogonal functions, convolution, Fourier and Laplace analysis, and frequency response of circuits and systems. Prerequisite(s): ECE 204; MTH 218. Corequisite(s): ECE 303L.

### **ECE 303L. Signals & Systems Laboratory. 1 Hour**

Laboratory investigation of signals and systems including signal decomposition, system impulse response, convolution, frequency analysis of systems, and filter design and realization. Prerequisite(s): ECE 204. Corequisite(s): ECE 303.

### **ECE 304. Electronic Systems. 3 Hours**

ELECTRONIC SYSTEMS Study of cascaded amplifiers, feedback amplifiers, linear integrated circuits, and oscillators including steady state analysis and analysis of frequency response. Prerequisite(s): ECE 303. Corequisite(s): ECE 304L.

### **ECE 304L. Electronic Systems Laboratory. 1 Hour**

Design, construction and verification of multistage amplifiers, differential amplifiers, feedback amplifiers, passive and active filters, and oscillators. Prerequisite(s): ECE 303. Corequisite(s): ECE 304.

### **ECE 314. Fundamentals of Computer Architecture. 3 Hours**

Study of computer systems organization, representation of data and instructions, instruction set architecture, processor and control units, memory devices and hierarchy, I/O devices and interfacing peripherals, high- to low-level language mapping, system simulation and implementation, applications and practical problems. Prerequisite(s): CPS 150; ECE 215. Corequisite(s): ECE 314L.

### **ECE 314L. Fundamentals of Computer Architecture Laboratory. 1 Hour**

Laboratory investigation of digital computer architecture covered in ECE 314. Computer sub-systems such as central processing units, control units, I/O units, and hardware/software interfaces will be experimentally considered. Simulation and implementation will be used to study applications and practical problems. Prerequisite(s): ECE 215. Corequisite(s): ECE 314.

### **ECE 316. Introduction to Electrical Energy Systems. 3 Hours**

A broad introduction to electric energy concepts. Generation, transmission, distribution, and utilization of electric energy. Renewable energy, three phase systems, transformers, power electronics, motors and generators. Contemporary topics. Prerequisite(s): EGR 203 or equivalent.

### **ECE 332. Electromagnetics. 3 Hours**

Study of vector calculus, electro- and magneto-statics, Maxwell's equations, and electromagnetic plane waves and their reflection and transmission from discontinuities. Prerequisite(s): PHY 232.

### **ECE 333. Applied Electromagnetics. 3 Hours**

Electromagnetic theory applied to problems in the areas of waveguides, radiation, electro-optics and electromagnetic interference and electromagnetic compatibility. Prerequisite(s): ECE 332.

**ECE 334. Discrete Signals & Systems. 3 Hours**

Introduction to discrete signals and systems including sampling and reconstruction of continuous signals, digital filters, frequency analysis, the z-transform, and the discrete Fourier transform. Prerequisite(s): ECE 303.

**ECE 340. Engineering Probability & Random Processes. 3 Hours**

Axiomatic probability, derived probability relationships, conditional probability, statistical independence, total probability and Bayes' Theorem, counting techniques, common random variables and their distribution functions, transformations of random variables, moments, autocorrelation, power spectral density, cross correlation and covariance, random processes through linear and nonlinear systems, linear regression, and engineering decision strategies. Prerequisite(s): ECE 303; MTH 218.

**ECE 398. Multidisciplinary Research & Innovation Laboratory. 1-6 Hours**

Students participate in 1.) selection and design, 2.) investigation and data collection, 3.) analysis, and 4.) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming, and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.

**ECE 401. Communication Systems. 3 Hours**

Study of amplitude, angle, pulse, and digital communication systems including generation, detection, and analysis of modulated signals and power, bandwidth, and noise considerations. Prerequisite(s): ECE 304, 340. Corequisite(s): ECE 401L.

**ECE 401L. Communication Systems Laboratory. 1 Hour**

Design, fabrication, and laboratory investigation of modulators, detectors, filters, and associated communication components and systems. Prerequisite(s): ECE 304. Corequisite(s): ECE 401.

**ECE 414. Electromechanical Devices. 3 Hours**

Properties and theory of electromechanical devices: nonlinear electromagnetic actuators; rotating machine analysis; field and circuit concepts and direct current, synchronous, and induction machines: special-purpose machines and fractional horsepower machines. Prerequisite(s): ECE 316 or equivalent.

**ECE 415. Control Systems. 3 Hours**

Study of mathematical models for control systems and analysis of performance characteristics and stability. Design topics include pole-placement, root locus, and frequency domain techniques. Prerequisite(s): ECE 303.

**ECE 416. Introduction to Industrial Robotic Manipulators. 3 Hours**

Topics include homogeneous transformations, direct and inverse kinematics, trajectory generation, and selected topics of robot vision. Prerequisite(s): ECE 303.

**ECE 431L. Multidisciplinary Engineering Design Laboratory I. 2 Hours**

Application of engineering fundamentals to sponsored multidisciplinary-team design projects. In a combination of lecture and lab experiences, students learn the product realization process and project management. Product realization topics include idea generation, proposal development, design specifications, conceptualization and decision analysis. Project management topics include cost estimation and intellectual property management. Design projects progress to the proof of concept and prototype development stages. Prerequisite(s): MEE students: EGM 303, MEE 321, and MEE 344 ECE students: ECE 304 and ECE 314.

**ECE 432L. Multidisciplinary Design II. 3 Hours**

Combination of lecture and laboratory experiences. The focus of the lecture is on project management aspects of engineering design, including communication, collaboration, project tracking methods, cost estimating, overhead, direct labor costs, time value of money, depreciation, and return on investment. The focus of the lab is on a multidisciplinary team design project. Detailed evaluation of the Product Realization Process (PRP), including specifications, innovation, conceptualization, decision analysis, embodiment design, final design and prototyping. Analysis of the design criteria for safety, ergonomic, environmental, financial, ethical, and socio-political impact. Periodic oral and status reports. Culminates in a comprehensive written report and oral presentation. Prerequisite(s): CPE majors: ECE 340, ECE 431L, ECE 444; ELE majors: ECE 340, ECE 431L, (ECE 401 or ECE 415).

**ECE 433. Project Management & Innovation. 1 Hour**

Introduces students and teams to project management, entrepreneurship, and innovation. Topics include project management, cost estimating, time value of money, patent law, marketing, finance, and business plan development. Prerequisite(s): Junior status.

**ECE 440. Physical Electronics. 3 Hours**

Introduction to wave mechanics, electron ballistics, theory of metals and semiconductors, electron emission, space charge flow, and modern electron devices. Prerequisite(s): MTH 219; PHY 232.

**ECE 441. Integrated Circuit Electronics. 3 Hours**

Integrated circuit design, construction and verification including the study of biasing, multistage differential and analog power amplification, and computer assisted design tools for "on-chip" design and layout. Prerequisite(s): ECE 304.

**ECE 442. Engineering Electromagnetics. 3 Hours**

Processing Maxwell's equations and applying the predictions to the analysis and design of engineering systems that make use of electromagnetic energy from ELF through optical frequencies. Topics include propagation, radiation, interactions with matter, guided waves, and antenna fundamentals. Prerequisite(s): ECE 333.

**ECE 443. Introduction to Electro-Optics. 3 Hours**

Introductory overview of electro-optics starting with Maxwell's equations and leading to lasers, holography, and other timely applications. Prerequisite(s): ECE 332.

**ECE 444. Advanced Digital Design. 3 Hours**

Systems approach to digital design including: structured top-down development process using simple and complex logic modules from various logic families; practical aspects of the design, construction, and verification of digital subsystems; application of microcomputer and/or controller as a flexible logic device; real-time embedded systems design; and the use of HDL tools and simulation. Prerequisite(s): ECE 314.

**ECE 445. Signal Processing. 3 Hours**

Study of signal conditioning, digital signal processing, and data processing. Topics include transducers, high gain amplifier design, digital filtering, and spectrum estimation. Specialized application determined by instructor. Prerequisite(s): ECE 334.

**ECE 446. Microelectronic Systems Design. 3 Hours**

Basic integrated circuit design concepts, system layout, application of design methodology, the fabrication process, manufacturing limitations of the design process, and CAD/CAE utilization to realize the design process. Prerequisite(s): ECE 304.

**ECE 447. Digital Control Systems. 3 Hours**

Analysis and synthesis of feedback control systems including digital compensators. Topics include performance and stability analysis, regulator and servomechanism design using time and frequency domain methods, and digital implementation case studies. Prerequisite(s): ECE 415; ECE 334 or equivalent.

**ECE 448. Fiber Optic Communications. 3 Hours**

General light guidance principles; ray optics; dispersion; single mode, multimode, and graded index fibers; basic laser and LED source principles; photodetectors; error probability in digital optical systems; rise time analysis; loss budget analysis; local area networks and long haul communication links. Prerequisite(s): ECE 333 Corequisite(s): ECE 401.

**ECE 449. Computer Systems Engineering. 3 Hours**

An introduction to advanced computer architecture and computer systems design. Topics include: exploration of principle architecture features of modern computers, pipelining, memory hierarchy, I/O devices, interconnection networks, introduction to parallel and multiprocessor systems, and the use of hardware description languages (HDLs) in system implementation. Prerequisite(s): ECE 444; (CPS 346 or permission of instructor).

**ECE 450L. Projects Laboratory. 1-3 Hours**

Project-oriented laboratory applying engineering skills in the design, development, and demonstration of electrical and electronic systems. Prerequisite(s): Permission of project advisor.

**ECE 471. Contemporary Power Systems & the Smart Grid. 3 Hours**

Introduction to electrical power systems; generation, transmission and utilization; power system analysis; power system control; energy management; and an introduction to smart grid technologies. Prerequisite(s): ECE 316 or equivalent.

**ECE 472. Smart Grid Technologies. 3 Hours**

An introductory study of enabling technologies and energy issues necessary for full realization of the Smart Grid. Course topics vary. This course can be taken multiple times. Prerequisite(s): ECE 471 or equivalent.

**ECE 493H. Honors Thesis. 3 Hours**

Selection, design, investigation, and completion of an independent, original research study resulting in a document prepared for submission as a potential publication and a completed undergraduate thesis. Restricted to students in University Honors Program.

**ECE 494H. Honors Thesis. 3 Hours**

Selection, design, investigation, and completion of an independent, original research study resulting in a document prepared for submission as a potential publication and a completed undergraduate thesis. Restricted to students in University Honors Program. Prerequisite(s): ECE 493.

**ECE 498. Multidisciplinary Research & Innovation Laboratory. 1-6 Hours**

Students participate in 1.) selection and design, 2.) investigation and data collection, 3.) analysis, and 4.) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming, and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.

**ECE 499. Special Problems in Electrical & Computer Engineering. 1-6 Hours**

Particular assignments to be arranged and approved by the department chairperson.

## Engineering Management

Minors:

- Engineering Management (p. 386)
- Operations Engineering (p. 386)

### Minor in Engineering Management (enm)

This twelve credit hour minor is open to all engineering and engineering technology majors. Completion of this minor will provide the student with understanding of basic concepts relevant to the management of engineering operations. Students who anticipate moving from technical to managerial positions during their careers may wish to consider this minor.

ENM 505	Management of Engineering Systems	3
ENM 530	Engineering Economy	3
or ISE 430	Engineering Economy	
Select two courses from:		6
ENM 500	Probability & Statistics for Engineers	
ENM 515	Human Factors Engineering	
ENM 534	Decision Making	
ENM 539	System Engineering/Project Management	
ENM 560	Quality Assurance	
ENM 565	Reliability Engineering I	
ENM 582	Engineering Organizational Development	
ISE 300	Probability & Statistics for Engineers	
ISE 421	Introduction to Operations Research <sup>1</sup>	
ISE 455	Production Engineering	
ISE 460	Quality Assurance	
ISE 465	Reliability & Maintainability	
MSC 521	Introduction to Operations Research	
MSC 555	System Dynamics I	
MSC 572	System Simulation	
Total Hours		12

<sup>1</sup> ENM 500 (or ISE 300 or MTH 367) is a prerequisite.

### Minor in Operations Engineering (ope)

This twelve hour minor is open to all engineering and engineering technology majors. Completion of this minor will provide the student with a strong foundation in the analytical tools needed to plan, design, optimize and manage complex engineering operations. Students who anticipate moving into problem-solving and decision-support roles during their engineering careers may wish to consider this minor.

ENM 500	Probability & Statistics for Engineers	3
or ISE 300	Probability & Statistics for Engineers	
ISE 421	Introduction to Operations Research <sup>1</sup>	3
or MSC 521	Introduction to Operations Research	
MTH 367	Statistical Methods I	3
Select one course from:		3
ENM 560	Quality Assurance <sup>2</sup>	
ENM 561	Design & Analysis of Experiments	
ENM 565	Reliability Engineering I	
ISE 460	Quality Assurance	

- <sup>1</sup> ENM 500 (or ISE 300 or MTH 367) is a corequisite.
- <sup>2</sup> ENM 500 (or ISE 300 or MTH 367) is a prerequisite.

## Engineering Technology

### Majors:

- Bachelor of Science in Engineering Technology, Electronic and Computer Engineering Technology (p. 387)
- Bachelor of Science (p. 389) in Engineering Technology (p. 387), Industrial Engineering Technology (p. 389)
- Bachelor of Science (p. 391) in Engineering Technology, (p. 387) Global Manufacturing Systems Engineering Technology (p. 391)
- Bachelor of Science (p. 392) in Engineering Technology, (p. 387) Mechanical Engineering Technology (p. 392)

### Minors:

- Automotive Systems (p. 393)
- Electronic and Computer Engineering Technology (p. 388)
- Engineering Technology (p. 394)
- Global Manufacturing Systems Engineering Technology (p. 392)
- Industrial Automation and Applied Robotic Systems (p. 394)
- Industrial Engineering Technology (p. 390)
- Integrated Arts and Technology (p. 394)
- Mechanical Engineering Technology (p. 393)
- Quality Assurance (p. 390)
- Sustainable Manufacturing (p. 395)

The School of Engineering also offers a Bachelor of Science in Engineering Technology. The programs in which the degree is offered are electronic and computer engineering technology, global manufacturing systems engineering technology, industrial engineering technology and mechanical engineering technology. The engineering technologist is usually involved in the design, performance evaluation, service and sales of products, equipment, and manufacturing systems or the management of these activities. The management of process operations and plant facilities are also important career paths.

The engineering technology programs provide: (1) specialized technical courses that emphasize rational thinking and the application of engineering and scientific principles to the practical solution of technological problems; (2) courses in applied mathematics and science sufficient to support the technical courses and to prepare the student for future growth; and (3) education to prepare students to communicate intelligently and to take places in society as responsible, humane, complete professionals.

The University of Dayton engineering technology programs prepare graduates who:

- are competent and productive in the practice of both the technical and communication aspects of their profession;
- demonstrate ethical and professional standards of conduct
- exhibit leadership qualities as appropriate for the practice of their profession;

- are involved in service activities that benefit their profession and their community; and
- are engaged in continuing professional development.

## Electronic and Computer Engineering Technology

The Electronic and Computer Engineering Technology Program (ECT) prepares students for careers in the electronics and computer fields. The ECT curriculum, while including a strong emphasis on computers, centers on applied engineering topics in circuit analysis, analog and digital electronic design, digital communications, digital circuits, microprocessors, software and data acquisition instrumentation. The graduate is prepared to work in industry at a variety of tasks including analog and digital design, microprocessor hardware and software applications, electronic controls, automation, engineering sales and support, product design and development and data communications. The curricula provide the strong foundation in the basic principles necessary to support any future career studies or development as dictated by changing technology or career roles.

### Faculty

Scott Schneider, Chairperson of Department of Engineering Technology  
Professors Emeriti: Farren, Hanneman, Hazen  
Professor: Segalewitz  
Associate Professors: Globig, Schneider  
Lecturer: Esmaeili

## Bachelor of Science with a major in Electronic and Computer Engineering Technology (ECT) minimum of 131 credit hours

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>		12
HST 103	West and the World	
REL 103	Introduction to Religious and Theological Studies	
PHL 103	Intro To Philosophy	
ENG 100	Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>		0-3
ENG 200	Writing Seminar II	
Oral Communication		3
CMM 100	Principles of Oral Communication	
Mathematics		3
Social Science		3
Arts		3
Natural Sciences <sup>4</sup>		7
Crossing Boundaries		variable credit
Faith Traditions		
Practical Ethical Action		
Inquiry		
Integrative		
Advanced Study		variable credit



Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

- <sup>1</sup> Completed with ASI 110 and ASI 120.
- <sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.
- <sup>3</sup> Completed with ENG 200H or ASI 120.
- <sup>4</sup> Must include two different disciplines and accompanying lab.

### Major Requirements

CHM 123 & 123L	General Chemistry and General Chemistry Laboratory	4
CMM 100	Principles of Oral Communication	3
ECT 110	Electrical Circuits I	3
ECT 110L	Electrical Circuits I Laboratory	1
ECT 120	Electrical Circuits II	3
ECT 206 & 206L	Electron Devices I and Electron Devices I Laboratory	4
ECT 224 & 224L	Digital Computer Fundamentals and Digital Computer Fundamentals Laboratory	4
ECT 306 & 306L	Electronic Devices II and Electronic Devices II Laboratory	4
ECT 357	Microprocessors I	3
ECT 358 & 358L	Microprocessors II and Microprocessors II Laboratory	4
ECT 361	Programming Structures	3
ECT 362	Concepts & Applications of Computer Operating Systems	3
ECT 408	Data Acquisition & Measurements	2
ECT 452	Feedback Controls	3
ECT 465	Digital Data Communications	3
ECT 466	Microcomputer Architecture	3
ECT 490	Senior Project	3
EGR 100	Enrichment Workshop (2 semesters)	0
EGR 103	Engineering Innovation	2
ENG 100 & ENG 200	Writing Seminar I and Writing Seminar II <sup>1</sup>	6
or ENG 200H	Writing Seminar II	
HST 103	West and the World	3
or HST 198	History Scholars' Seminar	
IET 316	Quantitative Analysis	3
IET 317	Industrial Economic & Financial Analysis	3
IET 323	Project Management	3
MCT 110L	Technical Drawing & CAD Laboratory	2
MCT 220	Statics & Dynamics	3
MFG 431	Controls for Industrial Automation	3
MTH 137	Calculus I with Review	4
MTH 138	Calculus I with Review	4
MTH 207	Introduction to Statistics	3
PHL 103	Intro To Philosophy	3
PHY 201 & 201L	General Physics and General Physics Laboratory	4

REL 103	Introduction to Religious and Theological Studies	3
SET 100	Engineering Technology First Year Seminar (2 semesters)	0
SET 101	Enrichment Workshop (2 semesters)	0
SET 153L	Technical Computation Laboratory	1
SET 200	Professional Development Seminar	0
SET 200	Professional Development Seminar	0
SET 499	Seminar	1
Electives		15
Technical electives <sup>2</sup>		12
Total Hours		131

- <sup>1</sup> The University's general reading and writing competency requirements are satisfied by completing ENG 100 and ENG 200, or ENG 200H with a grade of C- or higher. Students admitted to the University Honors program and students with sufficiently high verbal scores on the SAT and ACT are placed in ENG 200H. ENG 200H is a one-semester course which satisfies the University requirement. Students who are placed in ENG 200H do not receive credit for ENG 100 but are free to take elective course work in place of the waived first semester of composition.
- <sup>2</sup> Select from list approved by the Department of Engineering Technology.

## Minor in Electronic and Computer Engineering Technology (ECT)

This minor provides a concentration in the electronic and computer field that will complement the student's major program of study. It is open to all engineering technology majors except electronic or computer engineering technology. It is also available for other majors within the University if certain prerequisites have been met.

ECT 120	Electrical Circuits II	3
ECT 224 & 224L	Digital Computer Fundamentals and Digital Computer Fundamentals Laboratory	4
Select one emphasis from: <sup>1,2</sup>		6-8

### Analog Devices Emphasis

ECT 206 & 206L	Electron Devices I and Electron Devices I Laboratory
ECT 306 & 306L	Electronic Devices II and Electronic Devices II Laboratory

### Microprocessor Emphasis

ECT 357	Microprocessors I
ECT 358 & 358L	Microprocessors II and Microprocessors II Laboratory

### Software Emphasis

ECT 361	Programming Structures
ECT 362	Concepts & Applications of Computer Operating Systems

Total Hours	13-15
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- <sup>1</sup> Courses cannot be already required for student's major.
- <sup>2</sup> Accompanying laboratories are recommended but not required.



## Industrial Engineering Technology

The Industrial Engineering Technology Program has as its objective providing specialized education to prepare students for management and technical staff positions in manufacturing and service organizations such as health care, banking, transportation, food service, and government. Graduates may be involved in the economic selection and location of equipment, the planning of work methods and expected output, quality assurance, facilities layout, and scheduling and controlling the flow of materials. The curriculum emphasizes courses in work measurement, planning and control of lean processes, human factors, safety, facilities layout design and simulation, economic and financial analysis, statistical process control, management of projects and global technical organizations, cost estimating and cost control, and mathematical decision-making.

### Faculty

Scott Schneider, Interim Chairperson of the Department of Engineering Technology

Charlie Edmonson, Program Coordinator

Professors: Edmonson, Summers, Untener

Associate Professors: Blust, Falkowski, Globig

Adjunct Professor: R. Reynolds

## Bachelor of Science with a major in Industrial Engineering Technology (let) minimum of 131 credit hours

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
HST 103 West and the World	
REL 103 Introduction to Religious and Theological Studies	
PHL 103 Intro To Philosophy	
ENG 100 Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>	0-3
ENG 200 Writing Seminar II	
Oral Communication	3
CMM 100 Principles of Oral Communication	
Mathematics	3
Social Science	3
Arts	3
Natural Sciences <sup>4</sup>	7
Crossing Boundaries	variable credit
Faith Traditions	
Practical Ethical Action	
Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

- Completed with ASI 110 and ASI 120.
- Or ENG 100A and ENG 100B, or ENG 200H, by placement.
- Completed with ENG 200H or ASI 120.
- Must include two different disciplines and accompanying lab.

### Major Requirements

CHM 123 & 123L	General Chemistry and General Chemistry Laboratory	4
CMM 100	Principles of Oral Communication	3
ECT 110 & 110L	Electrical Circuits I and Electrical Circuits I Laboratory	4
EGR 100	Enrichment Workshop (2 semesters)	0
EGR 103	Engineering Innovation	2
ENG 100 & ENG 200	Writing Seminar I and Writing Seminar II <sup>1</sup>	6
or ENG 200H	Writing Seminar II	
HST 103	West and the World	3
or HST 198	History Scholars' Seminar	
IET 230	Work Measurement	3
IET 316	Quantitative Analysis	3
IET 317	Industrial Economic & Financial Analysis	3
IET 318	Statistical Process Control	3
IET 323	Project Management	3
IET 332	Facilities Layout Design	3
IET 408	Lean Management Methods	3
IET 415	Management of Global Technical Organizations	3
IET 418	Cost Estimating & Control	3
IET 420	Industrial & Environmental Safety	3
IET 435	Human Factors	3
IET 490	Senior Project	3
MCT 110L	Technical Drawing & CAD Laboratory	2
MCT 111L	Introduction to Design Laboratory	2
MCT 220	Statics & Dynamics	3
MCT 313	Industrial Mechanisms	3
MFG 108L	Manufacturing Processes Laboratory	1
MFG 204 & 204L	Materials & Processes and Materials & Processes Laboratory	4
MFG 206L	Dimensional Metrology Laboratory	1
MFG 208L	Geometric Dimensioning & Tolerancing Laboratory	1
MFG 438	Sustainable Manufacturing & Product Design	3
MTH 137	Calculus I with Review	4
MTH 138	Calculus I with Review	4
MTH 207	Introduction to Statistics	3
PHL 103	Intro To Philosophy	3
PHY 201 & 201L	General Physics and General Physics Laboratory	4
REL 103	Introduction to Religious and Theological Studies	3
SET 100	Engineering Technology First Year Seminar (2 semesters)	0
SET 101	Enrichment Workshop (2 semesters)	0
SET 153L	Technical Computation Laboratory	1
SET 200	Professional Development Seminar (2 semesters)	0

SET 499	Seminar	1
Electives		15
Technical electives <sup>2</sup>		15
Total Hours		131

<sup>1</sup> The University's general reading and writing competency requirements are satisfied by completing ENG 100 and ENG 200, or ENG 200H with a grade of C- or higher. Students admitted to the University Honors program and students with sufficiently high verbal scores on the SAT and ACT are placed in ENG 200H. ENG 200H is a one-semester course which satisfies the University requirement. Students who are placed in ENG 200H do not receive credits for ENG 100 but are free to take elective course work in place of the waived first semester of composition.

<sup>2</sup> Select from list approved by the Department of Engineering Technology.

## Minor in Industrial Engineering Technology (iet)

This minor is open to all majors except industrial engineering technology. The program provides a concentration in the industrial field that will complement the student's major field of study. All prerequisites and corequisites must be followed.

Choose four courses from: <sup>1</sup> 12

IET 230	Work Measurement
IET 317	Industrial Economic & Financial Analysis
IET 318	Statistical Process Control
IET 319	Quality Improvement Methods
IET 320	Quality Assurance Techniques
IET 321	Quality Management
IET 332	Facilities Layout Design
IET 408	Lean Management Methods
IET 415	Management of Global Technical Organizations
IET 418	Cost Estimating & Control
IET 420	Industrial & Environmental Safety
IET 435	Human Factors

**IET - Human Performance Emphasis <sup>2</sup>** 12

IET 230	Work Measurement
IET 415	Management of Global Technical Organizations
IET 420	Industrial & Environmental Safety
IET 435	Human Factors

**IET - Production Management Emphasis <sup>3</sup>** 18

IET 230	Work Measurement
IET 318	Statistical Process Control
IET 332	Facilities Layout Design
IET 408	Lean Management Methods
IET 418	Cost Estimating & Control
IET 420	Industrial & Environmental Safety

**IET - Cost Management Emphasis <sup>4</sup>** 12

IET 317	Industrial Economic & Financial Analysis
IET 408	Lean Management Methods

IET 415 Management of Global Technical Organizations

IET 418 Cost Estimating & Control

## Minor in Quality Assurance (qua)

This minor is open to all majors. The program provides a concentration in the field of quality control, quality assurance and quality management. Upon successful completion of this minor, the student will have command of statistical quality tools as well as the breadth of quality management concepts and experience in practical application of the tools. All prerequisites and corequisites must be followed.

IET 318	Statistical Process Control	3
IET 319	Quality Improvement Methods	3
IET 320	Quality Assurance Techniques	3
IET 321	Quality Management	3
Total Hours		12

## Global Manufacturing Systems Engineering Technology

Today's global economy has increasingly become borderless and is dominated by multi-national companies. This requires tomorrow's engineers to be able to work efficiently in multicultural teams. The Global Manufacturing Systems Engineering Technology program is creating a new type of "global engineer" both answering industry's demand and giving the upcoming engineer a competitive advantage in today's market place.

In the Global Manufacturing Systems Engineering Technology program you will use state-of-the-art technology to plan, design and implement the tools and machines needed to produce high quality products at competitive prices. Throughout the program you will also apply important concepts of the lean enterprise, global competitiveness, green engineering concepts and customer satisfaction.

The curriculum is highly interdisciplinary since the manufacturing professional must possess extensive technical skills and excellent humanistic skills in communications, computers, teamwork, information technology, globalism and multiculturalism. The technical courses emphasize engineering materials and manufacturing processes; mechanical, hydraulic, and pneumatic automation and electronic controls; computer integrated manufacturing; manufacturing planning and control; extensive laboratory experiences; the technical sciences and applied mathematics from college algebra, probability, statistics, calculus, and linear programming. The curriculum contains strong components from the humanities, social sciences and communications, plus foreign language and multicultural requirements. The technical electives allow the student versatility in developing technical breadth or depth. The program is designed to prepare the graduates for challenging careers in manufacturing and serves as an excellent foundation for a variety of advanced degree options.

### Faculty

Scott Schneider, Interim Chairperson of the Department of Engineering Technology

Robert L. Wolff, Program Coordinator

Professor Emeritus: Simon

Professors: Summers, Untener, Wolff

Associate Professors: Blust, Falkowski

Assistant Professor: Kozak

Adjunct Professor: Wendeln

## Bachelor of Science with a major in Global Manufacturing Systems Engineering Technology (gmt) minimum of 133 credit hours

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
HST 103 West and the World	
REL 103 Introduction to Religious and Theological Studies	
PHL 103 Intro To Philosophy	
ENG 100 Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>	0-3
ENG 200 Writing Seminar II	
Oral Communication	3
CMM 100 Principles of Oral Communication	
Mathematics	3
Social Science	3
Arts	3
Natural Sciences <sup>4</sup>	7
Crossing Boundaries	variable credit
Faith Traditions	
Practical Ethical Action	
Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

### Major Requirements

CHM 123 & 123L	General Chemistry and General Chemistry Laboratory	4
CMM 100	Principles of Oral Communication	3
ECT 110 & 110L	Electrical Circuits I and Electrical Circuits I Laboratory	4
ECT 408	Data Acquisition & Measurements	2
EGR 100	Enrichment Workshop (2 semesters)	0
EGR 103	Engineering Innovation	2
ENG 100 & ENG 200 or ENG 200H	Writing Seminar I and Writing Seminar II <sup>1</sup>	6
HST 103	West and the World	3

IET 316	Quantitative Analysis	3
IET 317	Industrial Economic & Financial Analysis	3
IET 318	Statistical Process Control	3
IET 323	Project Management	3
IET 408	Lean Management Methods	3
MCT 110L	Technical Drawing & CAD Laboratory	2
MCT 111L	Introduction to Design Laboratory	2
MCT 220	Statics & Dynamics	3
MCT 221	Strength of Materials	3
MCT 313	Industrial Mechanisms	3
MCT 336 & 336L	Fluid Power and Fluid Power Laboratory	4
MFG 108L	Manufacturing Processes Laboratory <sup>1</sup>	1
MFG 204 & 204L	Materials & Processes and Materials & Processes Laboratory	4
MFG 206L	Dimensional Metrology Laboratory	1
MFG 208L	Geometric Dimensioning & Tolerancing Laboratory	1
MFG 240	Manufacturing & Product Design	3
MFG 427	Computer Integrated Manufacturing & Global Manufacturing	3
MFG 431	Controls for Industrial Automation	3
MFG 432	Plastics, Composites & Nano Materials & Processes	3
MFG 434	Robotics & Computer Numerical Control	3
MFG 438	Sustainable Manufacturing & Product Design	3
MFG 490	Senior Project	3
MTH 137	Calculus I with Review	4
MTH 138	Calculus I with Review	4
MTH 207	Introduction to Statistics	3
PHL 103	Intro To Philosophy	3
PHY 201 & 201L	General Physics and General Physics Laboratory	4
REL 103	Introduction to Religious and Theological Studies	3
SET 100	Engineering Technology First Year Seminar (2 semesters)	0
SET 101	Enrichment Workshop (2 semesters)	0
SET 153L	Technical Computation Laboratory	1
SET 200	Professional Development Seminar (2 semesters)	0
SET 499	Seminar	1
Electives		15
Language requirements <sup>2</sup>		8
Technical elective <sup>3</sup>		3
Total Hours		133

<sup>1</sup> The University's general reading and writing competency requirements are satisfied by completing ENG 100 and ENG 200 or ENG 200H with a grade of C- or higher. Students admitted to the University Honors program and students with sufficiently high verbal scores on the SAT and ACT are placed in ENG 200H. ENG 200H is a one-semester course which satisfies the University requirement. Students who are placed in ENG 200H do not receive credit for ENG 100 but are free to take elective course work in place of the waived first semester of composition.

- <sup>2</sup> Students who have no or limited experience in a foreign language will be required to complete a two-course language sequence either LNG 101/LNG 141 (6 sem. hours) depending on their beginning proficiency. Students entering the University of Dayton and enrolled in the program will fulfill this requirement. Students passing the proficiency examination of one or both foreign language course requirements will be required to complete additional Technical electives to fulfill program credits requirements.
- <sup>3</sup> Select from list approved by the Department of Engineering Technology.

## Minor in Global Manufacturing Systems Engineering Technology (gmt)

This minor is open to all engineering technology majors except manufacturing. The program provides a concentration in manufacturing that will complement the student's major field of study. All prerequisites and corequisites must be followed.

Select four courses from: <sup>1</sup> 12

MFG 204 & 204L	Materials & Processes and Materials & Processes Laboratory
MFG 240	Manufacturing & Product Design
MFG 424	Robotics
MFG 427	Computer Integrated Manufacturing & Global Manufacturing
MFG 431	Controls for Industrial Automation
MFG 432	Plastics, Composites & Nano Materials & Processes
MFG 434	Robotics & Computer Numerical Control
MFG 438	Sustainable Manufacturing & Product Design

Total Hours 12

- <sup>1</sup> Courses selected may not be those already required for student's major.

## Mechanical Engineering Technology

The Mechanical Engineering Technology Program emphasizes the practical application of the principles of the mechanical field. Career opportunities are in mechanical design, computer-aided design, product evaluation and development, manufacturing engineering, computer-aided manufacturing, plant engineering, technical sales, technical service, fluid power, automation and supervision. A significant portion of the graduates are in technical management. The curriculum includes a core of technical sciences; applied courses in design, thermodynamics, fluid mechanics, and manufacturing; extensive laboratory experiences; and mathematics from college algebra through probability, statistics, calculus and differential equations. Courses are required in oral and written communication, with components in the humanities and social sciences to provide insight into the impact of technology on society. Concepts from basic education are stressed in technical courses. The curriculum is broad to prepare graduates for employment and provide a foundation on which to base continued study of changing technology.

### Faculty

Scott Schneider, Interim Chairperson of Department of Engineering Technology  
David H. Myszka, Program Coordinator

Professor Emeritus: Mott

Professors: Edmonson, Myszka, Untener, Wolff

Associate Professors: Blust, Falkowski

Assistant Professor: Kozak

## Bachelor of Science with a major in Mechanical Engineering Technology (mct) minimum of 132 credit hours

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
HST 103	West and the World
REL 103	Introduction to Religious and Theological Studies
PHL 103	Intro To Philosophy
ENG 100	Writing Seminar I <sup>2</sup>
Second-Year Writing Seminar <sup>3</sup>	0-3
ENG 200	Writing Seminar II
Oral Communication	3
CMM 100	Principles of Oral Communication
Mathematics	3
Social Science	3
Arts	3
Natural Sciences <sup>4</sup>	7
Crossing Boundaries	variable credit
Faith Traditions	
Practical Ethical Action	
Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

- <sup>1</sup> Completed with ASI 110 and ASI 120.

- <sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

- <sup>3</sup> Completed with ENG 200H or ASI 120.

- <sup>4</sup> Must include two different disciplines and accompanying lab.

### Major Requirements

CHM 123 & 123L	General Chemistry and General Chemistry Laboratory	4
CMM 100	Principles of Oral Communication	3
ECT 110 & 110L	Electrical Circuits I and Electrical Circuits I Laboratory	4
ECT 408	Data Acquisition & Measurements	2
EGR 100	Enrichment Workshop (2 semesters)	0
EGR 103	Engineering Innovation	2
ENG 100 & ENG 200	Writing Seminar I and Writing Seminar II <sup>1</sup>	6

or ENG 200H	Writing Seminar II	
HST 103	West and the World	3
IET 316	Quantitative Analysis	3
IET 317	Industrial Economic & Financial Analysis	3
IET 323	Project Management	3
MCT 110L	Technical Drawing & CAD Laboratory	2
MCT 111L	Introduction to Design Laboratory	2
MCT 220	Statics & Dynamics	3
MCT 221	Strength of Materials	3
MCT 231	Fluid Mechanics	3
MCT 313	Industrial Mechanisms	3
MCT 317	Machine Dynamics	3
MCT 330	Design of Machine Elements	3
MCT 336 & 336L	Fluid Power and Fluid Power Laboratory	4
MCT 342	Thermodynamics	3
MCT 490	Mechanical Engineering Technology Senior Project	3
MFG 108L	Manufacturing Processes Laboratory	1
MFG 204 & 204L	Materials & Processes and Materials & Processes Laboratory	4
MFG 206L	Dimensional Metrology Laboratory	1
MFG 208L	Geometric Dimensioning & Tolerancing Laboratory	1
MFG 240	Manufacturing & Product Design	3
MFG 431	Controls for Industrial Automation	3
MTH 137	Calculus I with Review	4
MTH 138	Calculus I with Review	4
MTH 207	Introduction to Statistics	3
PHL 103	Intro To Philosophy	3
PHY 201 & 201L	General Physics and General Physics Laboratory	4
PHY 202 & 202L	General Physics and General Physics Laboratory	4
REL 103	Introduction to Religious and Theological Studies	3
SET 100	Engineering Technology First Year Seminar (2 semesters)	0
SET 101	Enrichment Workshop (2 semesters)	0
SET 153L	Technical Computation Laboratory	1
SET 200	Professional Development Seminar (2 semesters)	0
SET 499	Seminar	1
Electives		15
Technical electives <sup>2</sup>		12
Total Hours		132

<sup>1</sup> The University's general reading and writing competency requirements are satisfied by completing ENG 100 and ENG 200 or ENG 200H with a grade of C- or higher. Students admitted to the University Honors program and students with sufficiently high verbal scores on the SAT and ACT are placed in ENG 200H. ENG 200H is a one-semester course which satisfies the University requirement. Students who are placed in ENG 200H do not receive credit for ENG 100 but are free to take elective course work in place of the waived first semester of composition.

<sup>2</sup> Select from list approved by the Department of Engineering Technology.

## Minor in Mechanical Engineering Technology (mct)

This minor is open to all engineering technology majors except mechanical. The program provides a concentration in the mechanical field that will complement the student's major field of study. All prerequisites and corequisites must be followed.

Select four courses from: <sup>1</sup> 12

MCT 221	Strength of Materials
MCT 231	Fluid Mechanics
MCT 313	Industrial Mechanisms
MCT 330	Design of Machine Elements
MCT 336 & 336L	Fluid Power and Fluid Power Laboratory
MCT 342	Thermodynamics
MCT 423	Product Development
MCT 430	Design of Fluid Power Systems
MCT 432	Heat Power
MCT 438	Heat Transfer
MCT 440	Applied Vibrations
MCT 445 & 445L	Experimental Mechanics and Experimental Mechanics Laboratory
MCT 446	Applied Finite Element Modeling

Total Hours 12

<sup>1</sup> Courses selected may not be those already required for student's major.

## Minor in Automotive Systems (ast)

This minor is open to all engineering technology majors. It is also available for other majors within the University if certain prerequisites have been met. The program provides a concentration in the automotive field that will compliment the student's major program of study.

ECT 456	Automotive Electrical & Safety Systems	3
MCT 456	Automotive Powertrain & Chassis Systems	3
Select two courses from: <sup>1</sup>		6
ECT 224	Digital Computer Fundamentals	
ECT 357	Microprocessors I	
IET 332	Facilities Layout Design	
IET 415	Management of Global Technical Organizations	
MCT 231	Fluid Mechanics	
MCT 342	Thermodynamics	
MCT 446	Applied Finite Element Modeling	
MFG 204	Materials & Processes	
MFG 204L	Materials & Processes Laboratory	
MFG 432	Plastics, Composites & Nano Materials & Processes	

Total Hours 12



<sup>1</sup> Courses cannot be required by student's major.

## Minor in Engineering Technology (egt)

This minor is open to all majors in the College of Arts and Sciences, the School of Business Administration and the School of Education and Health Sciences with the appropriate prerequisite background and approval of the Engineering Technology Department Chair. The program introduces the principles of applied engineering and complements many majors at the University.

Engineering Technology <sup>1</sup>	15
ECT 110      Electrical Circuits I	3
IET 323      Project Management	3
MCT 110L    Technical Drawing & CAD Laboratory	2
MFG 204      Materials & Processes	4
& 204L      and Materials & Processes Laboratory	
Select one course from:	3
ECT 120      Electrical Circuits II	
ECT 224      Digital Computer Fundamentals	
ECT 361      Programming Structures	
IET 317      Industrial Economic & Financial Analysis	
IET 408      Lean Management Methods	
IET 415      Management of Global Technical Organizations	
IET 435      Human Factors	
MCT 220      Statics & Dynamics	
MCT 231      Fluid Mechanics	
MFG 427      Computer Integrated Manufacturing & Global Manufacturing	
MFG 432      Plastics, Composites & Nano Materials & Processes	
MFG 434      Robotics & Computer Numerical Control	

<sup>1</sup> Prerequisites: SET 153L or equivalent competency and MTH 137 or equivalent competency.

## Minor in Industrial Automation and Applied Robotic Systems (ARS)

This minor is open to all majors in the School of Engineering. The program provides a concentration in the industrial automation and applied robotic systems field that will complement the student's major field of study. All prerequisites and corequisites must be followed.

<b>Industrial Automation and Applied Robotic Systems <sup>1</sup></b>	
ECT 452      Feedback Controls	3
MFG 424      Robotics	3
MFG 431      Controls for Industrial Automation	3
MFG 434      Robotics & Computer Numerical Control	3
Total Hours	12

<sup>1</sup> If the minor's required courses are already required by the student's major, the student may select ECT 224/ECT 224L, MCT 313, and/or MCT 317 to complete a total of at least twelve semester hours. Students in Engineering programs may not select courses with content similar to courses offered in their major.

## MINOR IN INTEGRATED ARTS AND TECHNOLOGY (IAT)

The Integrated Arts and Technology minor allows students to connect their aptitude for technical discipline with their passion for the arts. Students select one arts program (graphic design, music or theatre) and take at least 12 credits of coursework in that program. To put their knowledge to work in a practical and beneficial setting, students will also complete a service-learning project related to their arts program, which may provide academic credit.

This minor is open to all students enrolled in School of Engineering programs. All prerequisites and corequisites must be followed.

### Graphic Design Emphasis

Select four courses from:	12
CMM 344      Multimedia Design & Production I	
CMM 444      Multimedia Design & Production II	
SET 400      Special Topics in Engineering Technology	
VAD 215      Computer Applications- Design	
VAD 218      Computer Applications- Illustration	
VAD 220      Design Processes I	
VAD 240      Form & Concept	
VAD 310      Computer Illustration	
VAD 320      Design Processes II	
VAD 344      Design for Multimedia I	
VAD 351      Motion Design	
VAD 360      Web Design	
VAP 340      Digital Processes II	
VAR 345      Computer Modeling & Animation I	
VAR 440      Computer Modeling & Animation II	
VAR 445      Computer Modeling & Animation III	
Total Hours	12

### Technical Music Emphasis

Select four courses from:	12
CMM 340      Fundamentals of Broadcasting	
CMM 341      Audio Production	
MUS 205      Music, Technology and Culture	
MUS 223      Introduction to Music Technology	
MUS 323      Recording Arts & Digital Media	
SET 400      Special Topics in Engineering Technology	
Total Hours	12

### Television and Stage Production Emphasis

Select four courses from:	12
CMM 341      Audio Production	3
CMM 342      Fundamentals of Video Production	3
CMM 442      Advanced Television Production	3
SET 400      Special Topics in Engineering Technology	4
THR 203      Technical Production	3
THR 305      Theatre Stagecraft	3
THR 307      Theatre Lighting	3
Total Hours	34

## Minor in Sustainable Manufacturing (smf)

This minor is open to all majors in the School of Engineering, except Global Manufacturing Systems Engineering Technology (GMT). The program provides a concentration in sustainable manufacturing that will complement the student's major field of study. All prerequisites and corequisites must be followed.

### Sustainable Manufacturing <sup>1</sup>

ECT 461	Power Distribution & Control	3
MFG 204	Materials & Processes	3
MFG 204L	Materials & Processes Laboratory	1
MFG 432	Plastics, Composites & Nano Materials & Processes	3
MFG 438	Sustainable Manufacturing & Product Design	3
Total Hours		13

<sup>1</sup> If the minor's required courses are already required by the student's major, the student may select IET 420, MEE 472, MEE 473, MEE 478, and/or SEE 250 to complete a total of at least twelve semester hours. Students in Engineering programs may not select courses with content similar to courses offered in their major.

## Electronic and Computer engineering technology

### First Year

Fall	Hours Spring	Hours
CHM 123 (Satisfies CAP Natural Science)	3 CMM 100 (Satisfies CAP Communication)	3
CHM 123L	1 EGR 100	0
ENG 100 (Satisfies CAP Writing Seminar)	3 HST 103 (Satisfies CAP First-Year Humanities Common)	3
MTH 137 (Satisfies CAP Math Requirement)	4 MTH 138	4
PHL 103 (Satisfies CAP First-Year Humanities Common)	3 REL 103 (Satisfies CAP First-Year Humanities Common)	3
SET 100	0 SET 100	0
SET 153L	1 ECT 110	3
EGR 100	0 ECT 110L	1
EGR 103	2	
	<b>17</b>	<b>17</b>

### Second Year

Fall	Hours Spring	Hours
SET 200	0 SET 200	0
ECT 361	3 MCT 220	3
PHY 201	3 ECT 357	3
PHY 201L	1 ECT 206	3
ENG 200 (Satisfies CAP Second Year Writing Seminar)	3 ECT 206L	1
ECT 224	3 MTH 207	3
ECT 224L	1 Social Science (Satisfies CAP Social Science)	3

ECT 120	3	
	<b>17</b>	<b>16</b>

### Third Year

Fall	Hours Spring	Hours
MCT 110L	2 ECT 408	2
IET 316	3 ECT 362	3
Art Study (Satisfies CAP Art Study)	3 ECT 465	3
ECT 358	3 TECH Elective	3
ECT 358L	1 Advanced PHL Ethics (Satisfies CAP Crossing Boundaries and Practical Ethical Action)	3
ECT 306	3 MFG 431	3
ECT 306L	1	
	<b>16</b>	<b>17</b>

### Fourth Year

Fall	Hours Spring	Hours
Advanced REL (Satisfies CAP Crossing Boundaries Faith Traditions, Diversity and Social Justice)	3 ECT 490	3
ECT 466	3 ECT 452	3
IET 317	1-3 TECH Elective	3
IET 323	3 TECH Elective	3
TECH Elective	3 Advanced HST (Satisfies CAP Crossing Boundaries)	3
SET 499	1	
	<b>14-16</b>	<b>15</b>

Total credit hours: 129-131

## industrial engineering technology

### First Year

Fall	Hours Spring	Hours
SET 100	0 MFG 204	3
EGR 100	0 MFG 204L	1
EGR 103	2 SET 100	0
CHM 123 (Satisfies CAP Natural Science)	3 EGR 100	0
CHM 123L	1 HST 103 (Satisfies CAP First-Year Humanities Common)	3
ENG 100 (Satisfies CAP Writing Seminar)	3 PHL 103 (Satisfies CAP First-Year Humanities Common)	3
REL 103 (Satisfies CAP First-Year Humanities Common)	3 MTH 138	4
SET 153L	1 IET 230	3
MTH 137 (Satisfies CAP Math Requirement)	4	
	<b>17</b>	<b>17</b>

**Second Year**

<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
IET 323	3 SET 200	0
MCT 110L	2 MCT 313	3
MCT 220	3 IET 318	3
MTH 207	3 MCT 111L	2
ENG 200 (Satisfies CAP Second Year Writing Seminar)	3 Art Study (Satisfies CAP Art Study)	3
SET 200 (Satisfies CAP Second Year Writing Seminar)	0 MFG 208L	1
IET 317	1-3 MFG 206L	1
	CMM 100 (Satisfies CAP Communication)	3
	<b>15-17</b>	<b>16</b>

**Third Year**

<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
IET 408	3 IET 418	3
PHY 201L	1 IET 316	3
MFG 108L	1 ECT 110	3
MFG 438	3 ECT 110L	1
Social Science (Satisfies CAP Social Science)	3 TECH Elective	3
IET 332	3 Advanced PHL Ethics (Satisfies CAP Crossing Boundaries and Practical Ethical Action)	3
PHY 201	3	
	<b>17</b>	<b>16</b>

**Fourth Year**

<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
IET 420	3 IET 490	3
Advanced REL (Satisfies CAP Crossing Boundaries Faith Traditions, Diversity and Social Justice)	3 IET 415	3
IET 435	3 TECH Elect	3
TECH Elect	3 TECH Elect	3
TECH Elect	3 Advanced HST (Satisfies CAP Crossing Boundaries)	3
SET 499	1	
	<b>16</b>	<b>15</b>

Total credit hours: 129-131

## Global Manufacturing Systems engineering technology

**First Year**

<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
SET 100	0 MFG 204	3
EGR 100	0 MFG 204L	1
MFG 108L	1 MTH 138	4
CHM 123 (Satisfies CAP Natural Science)	3 SET 100	0

CHM 123L	1 EGR 100	0
ENG 100 (Satisfies CAP Writing Seminar)	3 PHL 103 (Satisfies CAP First-Year Humanities Common)	3
REL 103 (Satisfies CAP First-Year Humanities Common)	3 HST 103 (Satisfies CAP First-Year Humanities Common)	3
MCT 110L	2 SET 153L	1
MTH 137 (Satisfies CAP Math Requirement)	4 EGR 103	2
	<b>17</b>	<b>17</b>

**Second Year**

<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
MFG 206L	1 ECT 110	3
IET 408	3 ECT 110L	1
MCT 220	3 SET 200	0
SET 200	0 IET 318	3
CMM 100 (Satisfies CAP Communication)	3 MFG 240	3
MTH 207	3 MCT 221	3
MCT 111L	2 ENG 200 (Satisfies CAP Second Year Writing Seminar)	3
MFG 208L	1	
	<b>16</b>	<b>16</b>

**Third Year**

<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
MCT 336	3 IET 323	3
MFG 434	3 SET 499	1
PHY 201	3 MFG 431	3
PHY 201L	1 Language Requirement	3
MFG 432	3 TECH Elect	3
MCT 336L	1 Art Study (Satisfies CAP Art Study)	3
MCT 313	3	
	<b>17</b>	<b>16</b>

**Fourth Year**

<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
IET 317	1-3 MFG 490	3
Language Requirement	3 MFG 427	3
Advanced PHL Ethics (Satisfies CAP Crossing Boundaries and Practical Ethical Action)	3 ECT 408	2
IET 316	3 Advanced REL (Satisfies CAP Crossing Boundaries Faith Traditions, Diversity and Social Justice)	3
MFG 438	3 Social Science (Satisfies CAP Social Science)	3
	Advanced HST (Satisfies CAP Crossing Boundaries)	3
	<b>13-15</b>	<b>17</b>

Total credit hours: 129-131

## Mechanical Engineering Technology

### First Year

Fall	Hours Spring	Hours
SET 100	0 EGR 100	0
EGR 100	0 MFG 204L	1
MTH 137 (Satisfies CAP Math Requirement)	4 SET 153L	1
MFG 108L	1 MFG 204	3
CHM 123 (Satisfies CAP Natural Science)	3 MCT 110L	2
CHM 123L	1 MTH 138	4
ENG 100 (Satisfies CAP Writing Seminar)	3 PHL 103 (Satisfies CAP First-Year Humanities Common)	3
REL 103 (Satisfies CAP First-Year Humanities Common)	3 HST 103 (Satisfies CAP First-Year Humanities Common)	3
EGR 103	2 SET 100	0
	<b>17</b>	<b>17</b>

### Second Year

Fall	Hours Spring	Hours
MFG 208L	1 SET 200	0
MCT 220	3 IET 316	3
SET 200	0 MCT 221	3
MTH 207	3 MCT 231	3
PHY 201	3 MFG 206L	1
PHY 201L	1 PHY 202	3
ENG 200 (Satisfies CAP Second Year Writing Seminar)	3 PHY 202L	1
MCT 111L	2 CMM 100 (Satisfies CAP Communication)	3
	<b>16</b>	<b>17</b>

### Third Year

Fall	Hours Spring	Hours
ECT 110	3 SET 499	1
MCT 336	3 IET 317	1-3
MCT 336L	1 MCT 330	3
MCT 313	3 MFG 240	3
IET 323	3 MCT 317	3
Art Study (Satisfies CAP Art Study)	3 MFG 431	3
ECT 110L	1	
	<b>17</b>	<b>14-16</b>

### Fourth Year

Fall	Hours Spring	Hours
Social Science (Satisfies CAP Social Science)	3 MCT 490	3
MCT 342	3 TECH Elective	3
TECH Elective	3 TECH Elective	3
TECH Elective	3 Advanced REL (Satisfies CAP Crossing Boundaries Faith Traditions, Diversity and Social Justice)	3

Advanced PHL Ethics (Satisfies CAP Crossing Boundaries and Practical Ethical Action)	3 Advanced HST (Satisfies CAP Crossing Boundaries)	3
ECT 408	2	
	<b>17</b>	<b>15</b>
Total credit hours: 130-132		

## Electronic Computer Tech Courses

### ECT 110. Electrical Circuits I. 3 Hours

Practical concepts of single voltage source DC and AC circuits: current, voltage, resistance, power, series and parallel circuits, capacitance, magnetic circuits, and inductance. Corequisite(s): ECT 110L.

### ECT 110L. Electrical Circuits I Laboratory. 1 Hour

Experiments in single voltage source DC and AC circuits to accompany ECT 110. Three laboratory hours per week. Corequisite(s): ECT 110.

### ECT 120. Electrical Circuits II. 3 Hours

Practical concepts of multiple voltage and current source DC and AC circuits: reactance, impedance, phase, circuit analysis, power factor, resonance, filters, and transformers. Circuit calculations using vectors, complex algebra, and simultaneous equations. Prerequisite(s): ECT 110.

### ECT 206. Electron Devices I. 3 Hours

Fundamentals of semiconductor diodes, transistors (bipolar and field effect), amplifiers, biasing and small signal analysis. Prerequisite(s): ECT 120.

### ECT 206L. Electron Devices I Laboratory. 1 Hour

To accompany ECT 206. Three hours of laboratory a week.

### ECT 224. Digital Computer Fundamentals. 3 Hours

Fundamental theory and techniques of electronic data processing to include binary arithmetic, switching theory (Boolean algebra), and basic circuitry (gates, adders, registers, and memory). Prerequisite(s): ECT 110.

### ECT 224L. Digital Computer Fundamentals Laboratory. 1 Hour

To accompany ECT 224. Three hours of laboratory a week.

### ECT 306. Electronic Devices II. 3 Hours

Fundamentals of integrated circuits, operational amplifiers, transistors, photoelectric devices, silicon-controlled rectifiers, and their associated circuits. Prerequisite(s): ECT 206.

### ECT 306L. Electronic Devices II Laboratory. 1 Hour

To accompany ECT 306. Three hours of laboratory a week.

### ECT 357. Microprocessors I. 3 Hours

Study of microprocessor architecture, hardware, software, applications, and development tools. Prerequisite(s): ECT 224.

### ECT 358. Microprocessors II. 3 Hours

Advanced microprocessors study including development tools and software with regards to interfacing equipment in applications. Prerequisite(s): ECT 357, ECT 361. Corequisite(s): ECT 358L.

### ECT 358L. Microprocessors II Laboratory. 1 Hour

To accompany ECT 358. Emphasis on microcomputer programming. Three hours of laboratory a week. Prerequisite(s): ECT 357.

### ECT 361. Programming Structures. 3 Hours

The study of programming language concepts. Emphasis on the C language and its application to microcomputer hardware and software development. Prerequisite(s): SET 153L.

**ECT 362. Concepts & Applications of Computer Operating Systems. 3 Hours**

Introduction to the fundamentals and applications of computer operating systems and the interaction of hardware and software. Operating systems for large-scale, mini-, and microcomputers introduced through case studies. Prerequisite(s): ECT 357, ECT 361.

**ECT 400. Selected Topics. 1-4 Hours**

Investigation and discussion of current technical topics in electronic and computer engineering technology. May be taken more than once. Prerequisite(s): Permission of department chairperson.

**ECT 408. Data Acquisition & Measurements. 2 Hours**

Measurement and evaluation of the characteristics of engineering materials, structural mechanics, electromechanical systems, and physical systems. Emphasis on data acquisition, signal conditioning and manipulation, and virtual instrumentation. Prerequisite(s): ECT 110L; (ECT 206 or MCT 221); ENG 102; SET 153L.

**ECT 452. Feedback Controls. 3 Hours**

Study of principles of control including Nyquist criteria, Bode plots, PID loops, motor control virtual instrumentation, and advanced concepts. Laplace transform analysis is utilized. Prerequisite(s): ECT 306, ECT 408.

**ECT 456. Automotive Electrical & Safety Systems. 3 Hours**

Theory and design of charging systems, batteries, control systems, safety systems, and various sensor technologies. Overview of manufacturing and commercial aspects of the automotive industry. Prerequisite(s): ECT 110 or EGR 203.

**ECT 461. Power Distribution & Control. 3 Hours**

Study of power distribution systems including components, basic operation, polyphase circuits, characteristics, and application. Emphasis on the generation of electric power, its transmission, and its application to high power systems. Prerequisite(s): ECT 110.

**ECT 465. Digital Data Communications. 3 Hours**

Study of communication methods and protocols. Applications to networks, satellite communication, phone systems, fiber optics, modems, and other data transmission. A special emphasis is placed on digital networks. Prerequisite(s): ECT 358 or equivalent.

**ECT 466. Microcomputer Architecture. 3 Hours**

To develop an understanding of the basic hardware architecture of industry standard microcomputers including CPUs, standard busses, memory, mass storage devices, Systems-on-a-Chip and their implementation, I/O devices, and network interfaces. Study of architecture of recent microprocessors. Prerequisite(s): ECT 357 or equivalent.

**ECT 490. Senior Project. 3 Hours**

The design, construction and presentation of an original project. The project may be individual or part of an interdisciplinary engineering technology team project. Written and oral reports. Prerequisite(s): CMM 110, (CMM 111 or CMM 112); ECT 408; IET 323; MTH 138; senior status.

## Engineering Technology Courses

**SET 100. Engineering Technology First Year Seminar. 0 Hours**

Seminar for all engineering technology majors. Introduction to the University of Dayton, the School of Engineering, the Department of Engineering Technology, engineering technology programs and careers. Emphasizes professional ethics, critical thinking and communications, and team dynamics. Academic policies, academic planning, registration procedures, counseling and career placement services. Required of all first-year engineering technology students both semesters.

**SET 101. Enrichment Workshop. 0 Hours**

Workshop structured to provide collaborative learning for first-year Engineering Technology students. Work will focus on math, chemistry and other first year courses. Required of all first-year engineering technology students both semesters.

**SET 153L. Technical Computation Laboratory. 1 Hour**

Introduction to applications and use of computers for engineers with concentration on spreadsheets, electronic communications, and object oriented programming using Visual Basic.

**SET 198. Research & Innovation Laboratory. 1-6 Hours**

Students participate in 1) selection and design, 2) investigation and data collection, 3) analysis and 4) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered. Prerequisite(s): Permission of department chairperson.

**SET 200. Professional Development Seminar. 0 Hours**

Presentations on contemporary and professional engineering subjects by students, faculty, and engineers in active practice. The seminar addresses topics in key areas that complement traditional courses and prepare distinctive graduates, ready for life and work. Registration required for all sophomore students.

**SET 298. Research & Innovation Laboratory. 1-6 Hours**

Students participate in 1) selection and design, 2) investigation and data collection, 3) analysis and 4) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered. Prerequisite(s): Permission of department chairperson.

**SET 300. Engineering Technology Transfer Seminar. 0 Hours**

A seminar for full-time engineering technology majors who transferred from another academic institution. Introduction to the University of Dayton, the School of Engineering, the Department of Engineering Technology, engineering technology programs, and careers. Emphasizes professional ethics, critical thinking and communication, and team dynamics. Academic policies, academic planning, registration procedures, counseling, and career placement services.

**SET 398. Research & Innovation Laboratory. 1-6 Hours**

Students participate in 1) selection and design, 2) investigation and data collection, 3) analysis and 4) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered. Prerequisite(s): Permission of department chairperson.

**SET 400. Special Topics in Engineering Technology. 0-4 Hours**

Investigation and discussion of current topics in engineering technology. May be taken more than once. Prerequisite(s): Permission of department chairperson.



**SET 498. Research & Innovation Laboratory. 1-6 Hours**

Students participate in 1) selection and design, 2) investigation and data collection, 3) analysis and 4) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered. Prerequisite(s): Permission of department chairperson.

**SET 499. Seminar. 1 Hour**

Career planning for engineering technology majors. The job search process, resume preparation, the job interview, professional development. Required of all engineering technology majors in the junior or senior year.

**Global Manufact Sys Egr Tech Courses****MFG 108L. Manufacturing Processes Laboratory. 1 Hour**

Application of metal-cutting theory using single- and multiple-point cutting tools, basic metal removal process of toolroom and production machines. Experience on conventional milling machines, shapers, lathes, surface grinders, and drill presses. Three hours of laboratory a week.

**MFG 204. Materials & Processes. 3 Hours**

Chemical and physical properties of metals, ceramics, and polymers; casting processes; powdered metallurgy; metal forming; plastics processes. Oral and written presentation of a team case study. Corequisite(s): MFG 204L.

**MFG 204L. Materials & Processes Laboratory. 1 Hour**

Testing of materials for tensile strength, impact and hardness properties, cooling curves and equilibrium diagram development, heat treating and hardenability curve determination, cold forming, plastics materials processing, micro polishing and metallography; visits to local industries. Three hours of laboratory a week. Corequisite(s): MFG 204.

**MFG 206L. Dimensional Metrology Laboratory. 1 Hour**

Theory and practice of precision measurement including the surface plate, angle and sine plates; surface texture and roundness; optical microscope and profile projector; mechanical and electronic gages; coordinate measuring machine; length standards and height gages; fixed and functional gages; sources of measurement error. Three hours of laboratory a week. Prerequisite(s): MCT 110L; MTH 137.

**MFG 208L. Geometric Dimensioning & Tolerancing Laboratory. 1 Hour**

Study of the use of ANSI Y14.5M-1994, the engineering standard for geometric dimensioning and tolerancing. Includes the proper use of GD&T symbols, reading and interpretation of engineering drawings, techniques for determining part adherence to design requirements and workmanship standards. Prerequisite(s): MCT 110L.

**MFG 240. Manufacturing & Product Design. 3 Hours**

Manufacturing planning; process planning; advanced cutting tools; workholders; power presses-blanking, forming, draw dies, fine blanking; group technology, gage, jig, and fixture design. Prerequisite(s): MCT 110L; MFG 108L, MFG 204.

**MFG 400. Selected Manufacturing Topics. 1-4 Hours**

Investigation and discussion of current topics in manufacturing engineering technology. May be taken more than once. Prerequisite(s): Permission of department chairperson.

**MFG 424. Robotics. 3 Hours**

Study of robotics including history, robot geometry, cost justification, end-effector (types, use, and design), sensors, and programming. Application of robots in industries. Robot programming and operation projects and end-effector design projects. Prerequisite(s): MCT 220, MCT 313; SET 153L.

**MFG 427. Computer Integrated Manufacturing & Global Manufacturing. 3 Hours**

Computer Integrated Manufacturing (CIM) systems and interrelationships; group technology, computer-aided process planning, expert systems, local area networks, automated flow lines, data collection, and material handling. Also covered are global manufacturing issues and specific country concerns. Prerequisite(s): ECT 110; MFG 108L, MFG 204; SET 153L.

**MFG 431. Controls for Industrial Automation. 3 Hours**

Topics include: fundamentals of digital logic, pneumatic power, electromechanical sensors and actuators, pneumatic and electrical control circuit analysis and design, industry safety and design standards, concepts of mechatronics, programmable logic controllers, and networking communications. Prerequisite(s): ECT 110; SET 153L.

**MFG 432. Plastics, Composites & Nano Materials & Processes. 3 Hours**

Introduction to the more common plastics, composites, and nano engineering materials and their properties. Study of processes including extrusion, injection molding, blow molding, compression and transfer molding, and forming. Topics on part and tooling design. Prerequisite(s): CHM 123; MFG 204.

**MFG 434. Robotics & Computer Numerical Control. 3 Hours**

Programming of CNC turning and machining centers and industrial robots; application of CAM software to design and edit CNC and robot programs, edit programs, and display tool and motion paths. Parametric part programming concepts to produce complex surfaces. Programming of robotic devices. Prerequisite(s): MCT 110L; MFG 108L; SET 153L.

**MFG 435. Advanced Numerical Control. 3 Hours**

Instruction in the programming of complex, multi-axis CNC machines. Extended parametric programming. Programming language techniques. Prerequisite(s): MFG 434.

**MFG 438. Sustainable Manufacturing & Product Design. 3 Hours**

Design for the environment, sustainable manufacturing processes and business practices to support these topics are developed. Prerequisite(s): (MFG 108L, MFG 204; MTH 138) or permission of instructor.

**MFG 490. Senior Project. 3 Hours**

Study and research in a specific area that integrates major elements from previous design and manufacturing process courses, culminating in individual and/or group projects, technical reports, and presentations. Prerequisite(s): CMM 110, (CMM 111 or CMM 112); IET 323; MFG 108L, MFG 208L, MFG 240, MFG 431; MCT 111L; MTH 138; senior status.

**Industrial Engineering Tech Courses****IET 230. Work Measurement. 3 Hours**

Fundamentals of work simplification, motion economy, and productivity improvement using the techniques of time-and-motion study. Setting of labor standards using the techniques of stop watch, pre-determined time, standard data, and work sampling. Prerequisite(s): MTH 137.

**IET 230L. Work Measurement Laboratory. 1 Hour**

The application of real-world time-and-motion-study techniques such as operation process, worker-machine, and assembly charts. Calculations for time standards, production efficiency, line balance, cost reduction, labor, and equipment. A written and oral report on a team project. Three hours of laboratory each week. Prerequisite(s): MTH 137 Corequisite(s): IET 230.

**IET 316. Quantitative Analysis. 3 Hours**

Introduction of the mathematical techniques used to support decision making and managerial analysis. Probability theory, decision theory, linear programming, queuing theory, matrix algebra, differential and integral calculus, and differential equations. Prerequisite(s): MTH 138 or MTH 168; MTH 207.

**IET 317. Industrial Economic & Financial Analysis. 1-3 Hours**

Comparison of manufacturing or service industry projects and investments based on their economic value. Quantification of costs and benefits; analysis using present worth, annual worth, and rate of return methods. Study of simple and compound interest. Basic financial accounting concepts, including balance sheets, income statements, change of financial condition, etc. Prerequisite(s): MTH 137.

**IET 318. Statistical Process Control. 3 Hours**

Statistics and probability theory applied to produce control charts ( $\bar{x}$ -bar, R, s, p, u, and c) to monitor processes. Interpretation and application of these charts. Problem solving techniques, Pareto analysis, and modern quality management techniques. Prerequisite(s): MTH 207.

**IET 319. Quality Improvement Methods. 3 Hours**

Study of problem-solving methodologies and techniques. Team development. Students will learn to use Pareto diagrams, force field analysis, cause and effect diagrams, process mapping, and other problem-solving tools. Quality costs, product liability, and ethics are also covered. Prerequisite(s): IET 318.

**IET 320. Quality Assurance Techniques. 3 Hours**

Students will be exposed to a variety of current quality assurance topics that companies use to improve quality, increase productivity, and reduce costs. Topics include: total preventive maintenance, quality function deployment, reliability engineering, design of experiments, and sample size selection. Prerequisite(s): IET 318; MTH 207.

**IET 321. Quality Management. 3 Hours**

Provides students with an understanding of managing a total quality environment to improve quality, increase productivity and reduce costs. An introduction to Deming, Juran, and others. Total Quality Management implementation strategies, requirements of ISO 9000, QS 9000, and the Malcolm Baldrige award will be covered. Prerequisite(s): IET 318; MTH 207.

**IET 323. Project Management. 3 Hours**

Study of the structure, techniques, and application of project management including project proposals, project plans, decision making, styles of management, and communications. Semester team project with written and oral presentations. Prerequisite(s): SET 153L.

**IET 332. Facilities Layout Design. 3 Hours**

Design of manufacturing and service facilities for the most efficient flow of raw materials, work-in-process, and completed stock through a work place. Facilities layout, material handling, and warehousing in relation to trends toward reduced inventory, smaller lot sizes, and just-in-time. Prerequisite(s): MCT 110L. Corequisite(s): MCT 111L.

**IET 346. Six Sigma Yellow Belt. 1.5 Hour**

This course is designed to facilitate skill acquisition along with clinical reasoning and decision making as it relates to the physical therapy care and management of various advanced topics including cardiopulmonary rehabilitation, women's health issues, manual therapy strategies, electrotherapeutics as well as orthopedic, neurological, and pediatric therapeutic interventions. Prerequisite(s): Successful completion of all prior course work as outlined in the University of Dayton DPT curriculum.

**IET 400. Selected Topics. 1-4 Hours**

Self-paced research course. Preparation of a documented written research project on an engineering technology subject. May not be taken more than once. Prerequisite(s): Junior or senior status; permission of department chairperson.

**IET 408. Lean Management Methods. 3 Hours**

Study of the principles and current practices of optimizing production using Lean Management concepts. Lean Thinking, Just-in-Time, Kaizen, set-up reduction, pull systems, focused factories, standard operations, total productive maintenance, and defect-free processing methods are studied and applied. Prerequisite(s): Junior or senior status.

**IET 415. Management of Global Technical Organizations. 3 Hours**

Study of the structure of industrial and service organizations; study of the duties and responsibilities of a manager or supervisor in a global technical organization in developing an effective project or production team. Study of labor administration; labor legislation, current labor practices and international management.

**IET 418. Cost Estimating & Control. 3 Hours**

Study of the fundamentals of cost estimating of labor, material, and overhead for products, projects, operations, and systems. The concepts of internal and external cost estimating, types of costs, budgets, and profit. Semester team and individual projects, written and oral. Study of job order and process cost accounting, activity based costing, and cost-volume-profit relationships. Prerequisite(s): MTH 137.

**IET 420. Industrial & Environmental Safety. 3 Hours**

Application of safety techniques and principles to identify and correct unsafe situations and practices. Study of system safety, failure modes and effects analysis, fault tree analysis, preliminary hazard analysis, hazardous materials and practices, OSHA, health and personal protection.

**IET 423. The IET in Service Organizations. 3 Hours**

Case studies, articles, guest speakers, and projects to provide insight into how industrial engineering technology skills and training can be applied to service industries including hospitals, banks, and eating and retailing establishments. Prerequisite(s): IET major; junior status.

**IET 425. Elements of Cost Control. 3 Hours**

Survey of the methods of breakdown and cost analysis of labor, material, and overhead used in manufacturing and service organizations. Basic financial and cost accounting including balance sheets, income statements, change of financial condition, ratio analysis, and Activity-Based Costing. Prerequisite(s): MTH 137.

**IET 435. Human Factors. 3 Hours**

Methods to improve the interface between humans and their environment. Human characteristics are studied to determine the best way to design the task, product, work station, or other environmental features to accommodate the human. Written and oral projects. Prerequisite(s): (Junior or senior status) or permission of instructor.

**IET 446. Six Sigma Green Belt. 3 Hours**

Learn, practice, and use six-sigma tools in preparation of a final certification project in a commercial business situation. Use, analyze and solve an identified business variation problem to achieve industry recognized certification.

**IET 490. Senior Project. 3 Hours**

Applications of IET principles to a real world project using student teams for analysis and productivity improvement. Students will manage a project, applying planning, scheduling, monitoring, and control techniques. Oral and written project proposals, status updates, and final reports presented by teams of students to the management of the sponsoring organizations. Prerequisite(s): CMM 110, (CMM 111 or CMM 112); IET 317, IET 323, IET 332, IET 408, IET 435; MTH 138; senior status.

**Mechanical Engineering Tech Courses****MCT 110L. Technical Drawing & CAD Laboratory. 2 Hours**

Technical sketching and shape description, orthographic projection theory, multi-view drawings, necessary views, sectional views, working and shop drawings, dimensioning practices, tolerancing, thread and fastener representation and nomenclature, assembly and detail drawings. Six hours of laboratory a week using instruments and commercial computer-aided design (CAD) software.

**MCT 111L. Introduction to Design Laboratory. 2 Hours**

Advanced topics of Computer Aided Design using three-dimensional, parametric, solid modeling software. Laboratory assignments involving the CAD software are completed through a series of individual and team design projects. Introduction to design requirements, conceptualization, and design decisions. Computer drafting topics such as ANSI Y14.5M-1994 geometric dimensioning and tolerancing standards, weld symbols, machining and surface finish symbols. Blueprint reading. Prerequisite(s): MCT 110L.

**MCT 220. Statics & Dynamics. 3 Hours**

Study of forces on bodies at rest and in motion using Newton's three laws of motion. Vectors, force systems, components, reactions, resultants, free body diagrams, equilibrium, centroids, moment of inertia, kinetics, and kinematics. Prerequisite(s): SET 153L. Corequisite(s): MTH 137.

**MCT 221. Strength of Materials. 3 Hours**

Analysis and design of load-carrying members, considering stress, strain, and deflection. Study of direct tension, compression, and shear; torsion; shear and moment diagrams; bending; combined stress; analysis of columns; pressure vessels. Prerequisite(s): MCT 220; MFG 204, MFG 204L; MTH 137; SET 153L.

**MCT 231. Fluid Mechanics. 3 Hours**

Fluid properties, fluid statics including manometry, submerged surfaces, buoyancy and stability of floating bodies. The principles of fluid flow including Bernoulli's and energy equations, energy losses, and pump power. Analysis and design of pipe line systems and open channels; pump selection. Prerequisite(s): MTH 137; SET 153L.

**MCT 313. Industrial Mechanisms. 3 Hours**

Design and analysis of linkages and cams. Graphical solutions to kinematics problems including the concepts of instantaneous motion and relative motion. Development and analysis of motion diagrams. Study of geometric features of gears and gear transmission systems. Prerequisite(s): MCT 110L, MCT 220; MTH 137; SET 153L.

**MCT 317. Machine Dynamics. 3 Hours**

Principles of applied engineering mechanics as they relate to machines; static force analysis in both 2 and 3 dimensional systems, kinetics of machine components by the methods of force-mass-acceleration, work-energy, and impulse-momentum; machine balancing; introduction to mechanical vibrations. Prerequisite(s): MCT 111L, MCT 313; MTH 138.

**MCT 330. Design of Machine Elements. 3 Hours**

Analytical design techniques used to evaluate machine elements; stress analysis, working stress, failure theories, fatigue failure; design methods for spur gears, shafts, keys and couplings, roller and journal bearings, and springs. Original design project. Prerequisite(s): MCT 111L, MCT 221; MFG 208L; SET 153L.

**MCT 336. Fluid Power. 3 Hours**

Study of hydraulic and pneumatic fluid power components and systems used in industrial, mobile, and aerospace applications; standard symbols in circuit design; circuit analysis; specification for pumps, valves, cylinders, and circuits; hydraulic fluids; filtration; electric motors; system efficiencies; proportional control and electrohydraulic servo control systems; seals; fluid conductors; pneumatic components and systems. Library research project. Prerequisite(s): MCT 221. Corequisite(s): MCT 336L.

**MCT 336L. Fluid Power Laboratory. 1 Hour**

To accompany MCT 336. Evaluation of fluid power components: pressure, flow, RPM, sound level, current, voltage, power, torque, and time. Graphical design, computational analysis, assembly, and testing of typical circuits and systems. Testing of hydraulic fluids for viscosity, pour point, flash and fire point, specific gravity. Three hours of laboratory a week.

**MCT 342. Thermodynamics. 3 Hours**

Energy analysis of engineering systems using the concepts and laws of thermodynamics. The principle of the mechanical equivalent of heat, behavior of pure substances, use of thermodynamic property tables, and study of gas mixtures. Application of the Carnot cycle to both heat engines and reversed heat engines. Prerequisite(s): MCT 231; MTH 138; SET 153L.

**MCT 400. Selected Mechanical Topics. 1-4 Hours**

Investigations and discussion of current technical topics in mechanical engineering technology. Research report. May be taken more than once. Prerequisite(s): Permission of department chairperson.

**MCT 423. Product Development. 3 Hours**

Synthesis of mechanical devices and systems. Emphasis on the integration of various machine elements into a single unit. Activities include design, scheduling, budgeting, purchasing, fabrication, assembly and performance testing of an original team project. Prerequisite(s): MCT 330.

**MCT 430. Design of Fluid Power Systems. 3 Hours**

Energy efficiency; pressure drop determinations, variable volume pressure-compensated pumps, accumulators, proportional and electrohydraulic valves, cylinder design, hydraulic motor selection; circuit design, open and closed loop systems, power unit design; sizing of electric motors; use of industrial data and National Fluid Power Assn.-JIC design standards. Individual design project. Prerequisite(s): MCT 336.

**MCT 432. Heat Power. 3 Hours**

Applications of the principles of thermodynamic cycles. Analysis of energy transfer systems such as internal combustion and gas turbine engines. Power generation through steam cycles including reheat and regenerative cycles. Reversed heat engine cycles and vapor compression cycles used in heating and cooling. Prerequisite(s): MCT 342; SET 153L.

**MCT 438. Heat Transfer. 3 Hours**

The principles of conduction, convection, and thermal radiation energy transfer. Conduction through series and parallel walls, pipes, and containers. Forced and free convection through films, thermal radiation of energy between surfaces, and the overall transfer of heat. Prerequisite(s): MCT 231; SET 153L.

**MCT 440. Applied Vibrations. 3 Hours**

Free and forced vibration of single degree of freedom systems with and without damping. Industrial applications including reciprocating and rotating machinery, balancing, isolation, and noise reduction. Demonstrations of vibration sensors and instrumentation. Prerequisite(s): MCT 317; SET 153L.

**MCT 445. Experimental Mechanics. 3 Hours**

The selection, application, and use of strain gages and strain gage rosettes. Transformation of stress and strain. Advanced mechanics of materials topics with empirical verification of theoretical predictions. Prerequisite(s): MCT 221.

**MCT 445L. Experimental Mechanics Laboratory. 1 Hour**

Installation of strain gauge rosettes. Experiments to determine the state of strain and stress in structures using strain gauges, photoelasticity, and brittle coatings. Vibration measurement using strain gauges, accelerometers, and motion transducers. Written and oral reports.

**MCT 446. Applied Finite Element Modeling. 3 Hours**

Introduction to the fundamentals of structural finite element modeling. Geometry creation, element types, material specification, problem solution and results postprocessing. A focus is placed on modeling techniques using commercially available software. Prerequisite(s): MCT 221; SET 153L.

**MCT 456. Automotive Powertrain & Chassis Systems. 3 Hours**

Theory and design of engines, transmissions, suspension, and chassis systems. Overview of manufacturing and commercial aspects of the automotive industry. Prerequisite(s): EGR 201 or MCT 220.

**MCT 490. Mechanical Engineering Technology Senior Project. 3 Hours**

Bringing together analytical and graphical techniques from previous courses to accomplish the design of a complete mechanism, machine, or mechanical system. Conceptual, preliminary, and final design. Prototyping and evaluation of an original team project. Written and oral reports. Prerequisite(s): CMM 110, (CMM 111 or CMM 112); IET 323; MCT 111L, MCT 317, MCT 330; MTH 138; senior status.

## Mechanical and Aerospace Engineering

Major:

- Bachelor of Mechanical Engineering (p. 403)

Concentrations:

- Aerospace Engineering (p. 404)
- Energy Systems-Mechanical (p. 404)

Minors:

- Aerospace Engineering (p. 404)
- Mechanical Systems (p. 404)

Mechanical engineers apply principles of motion, energy, force, materials and mathematics to design and analyze a wide variety of products and systems. The field requires an understanding of core concepts including mechanics, kinematics, thermodynamics, heat transfer, materials science and controls. Mechanical engineers use these core principles along with tools like computer-aided engineering and product life cycle management to design and analyze manufacturing plants, industrial equipment and machinery, heating and cooling systems, automotive systems, aircrafts, robotics, medical devices and more. Today, mechanical engineers are pursuing developments in such fields as composites, mechatronics, nanotechnology, and are helping to create a more sustainable future.

The mechanical engineering curriculum serves as a broad-based education for positions in these diverse fields or for graduate study leading to advanced degrees. The first part of the mechanical engineering curriculum provides a firm foundation in mathematics, physics, chemistry, computer-aided drawing and conceptual design, and the humanities. The second part of the curriculum provides the engineering science fundamentals and laboratory experiences necessary for testing, design, as well as continued learning in the humanities, arts and social sciences. The final part of the curriculum emphasizes synthesis of knowledge through major design projects. The curriculum includes sufficient elective courses to permit a concentration in aerospace, energy systems and engineering as well as minors in several other areas.

The education experience, guided by the University of Dayton Catholic and Marianist heritage, seeks to prepare graduates who will:

- have the ability to apply mathematics, science, and engineering fundamentals and computational tools to design components, systems and/or processes;
- have the ability to design and conduct experiments and analyze and interpret data;
- have the ability to communicate their ideas/solutions effectively;
- serve as effective team members and leaders;
- understand the social, environmental and economic impact of engineering in a global context;
- be able to think critically about contemporary issues;
- continue their personal and professional development by engaging in lifelong learning;
- integrate ethical action, integrity, and service into their profession and lives.

### Faculty

J. Kelly Kissock, Chairperson

Professors Emeriti: Chuang, Doepker, Eastep, Eimermacher, Schauer

Professors: Doyle, Ervin, Hallinan, Jain, Kashani, Kissock, Murray

Associate Professors: Altman, Petrykowski, Pinnell

Assistant Professors: Bigelow, Choi, Hall, Heyne, Rumpfkeil

Lecturer: Henrick



## Bachelor of Mechanical Engineering (MEE) minimum of 132 Credit hours

### Common Academic Program (CAP)

\*credit hours will vary depending on courses selected

First-Year Humanities Commons <sup>1</sup>	12
HST 103 West and the World	
REL 103 Introduction to Religious and Theological Studies	
PHL 103 Intro To Philosophy	
ENG 100 Writing Seminar I <sup>2</sup>	
Second-Year Writing Seminar <sup>3</sup>	0-3
ENG 200 Writing Seminar II	
Oral Communication	3
CMM 100 Principles of Oral Communication	
Mathematics	3
Social Science	3
Arts	3
Natural Sciences <sup>4</sup>	7
Crossing Boundaries	variable credit
Faith Traditions	
Practical Ethical Action	
Inquiry	
Integrative	
Advanced Study	variable credit
Philosophy and/or Religious Studies	
Historical Studies	
Diversity and Social Justice	3
Major Capstone	0-3

<sup>1</sup> Completed with ASI 110 and ASI 120.

<sup>2</sup> Or ENG 100A and ENG 100B, or ENG 200H, by placement.

<sup>3</sup> Completed with ENG 200H or ASI 120.

<sup>4</sup> Must include two different disciplines and accompanying lab.

### Major Requirements

CHM 123 General Chemistry	3
CHM 123L General Chemistry Laboratory	1
or PHY 210L General Physics Laboratory	
CMM 100 Principles of Oral Communication	3
ECE 201L Circuit Analysis Laboratory	1
EGM 202 Dynamics	3
EGM 303 Mechanics II	3
EGR 100 Enrichment Workshop (2 semesters)	0
EGR 103 Engineering Innovation	2
EGR 201 Engineering Mechanics	3
EGR 202 Engineering Thermodynamics	3
EGR 203 Electrical & Electronic Circuits	3
ENG 100 Writing Seminar I	6
& ENG 200 and Writing Seminar II	
or ENG 200H Writing Seminar II	

HST 103 or HST 198 The West & the World History Scholars' Seminar	3
MEE 101 Introduction to Mechanical Engineering (2 semesters)	0
MEE 104L Computer Graphics I	1
MEE 200 Professional Development Seminar (2 semesters)	0
MEE 227L Computer Graphics II	1
MEE 308 Fluid Mechanics	3
MEE 312 Engineering Materials I and Materials Laboratory & 312L	4
MEE 314 Computational Methods	3
MEE 321 Theory of Machines	3
MEE 341 Engineering Experimentation	3
MEE 410 Heat Transfer and Thermo-Fluids Laboratory & 410L	4
MEE 415 Professional Development I	0
MEE 416 Professional Development II	1
MEE 427 Mechanical Design I	3
or MEE 425 Aerospace Design	
MEE 431L Multidisciplinary Engineering Design Laboratory I	2
MEE 432L Multidisciplinary Engineering Design Laboratory II	3
MEE 433 Project Management & Innovation	1
MEE 439 Dynamic Systems & Controls	4
or MEE 440 Flight Vehicle Performance	
MEE 460 Engineering Analysis	3
MTH 168 Analytic Geometry & Calculus I	4
MTH 169 Analytic Geometry & Calculus II	4
MTH 218 Analytic Geometry & Calculus III	4
MTH 219 Applied Differential Equations	3
PHL 103 Introduction to Philosophy	3
PHY 206 General Physics I - Mechanics	3
PHY 207 General Physics II - Electricity & Magnetism	3
REL 103 Introduction to Religious and Theological Studies	3
Select one course from:	3
MEE 344 Manufacturing Processes	
MEE 401 Aerodynamics	
MEE 478 Energy Efficient Manufacturing	
Electives	12
Ethics elective <sup>1</sup>	3
Math/Science elective <sup>1</sup>	3
MEE electives <sup>1</sup>	6
Open electives <sup>1</sup>	6
Total Hours	133

<sup>1</sup> Select from list approved by the Mechanical and Aerospace Engineering Department.



## Concentration in Aerospace Engineering (AEC)

This concentration is open only to mechanical engineering majors. The program provides a strong background for career specialization in the fields of aircraft and aerospace engineering.

MEE 225	Introduction to Flight	3
MEE 401	Aerodynamics	3
MEE 409	Aerospace Structures	3
MEE 425	Aerospace Design	3
MEE 440	Flight Vehicle Performance	4
Select one course from:		3
MEE 413	Propulsion	
Approved graduate AEE course		
Total Hours		19

## Concentration in Energy Systems-Mechanical (MRS)

This concentration is open to all engineering students.

Select three courses from:		9
ASI 320	Cities & Energy	
CEE 390	Environmental Pollution Control	
CEE 434	Water & Wastewater Engineering	
ECO 435	Economics of the Environment	
PHL 321	Environmental Ethics ,Environmental Ethics	
PHY 220	Energy & Environmental Physics	
POL 371	Environmental Policy	
SEE 301	Global Change & Earth Systems	
SEE 401	Sustainability Research I	
Any approved Arts and Science energy/sustainability related elective		
Select three courses from:		9
AEE 565	Fundamentals of Fuels & Combustion	
or MEE 565	Fundamentals of Fuels & Combustion	
AEE 566	Combustion Theory	
MEE 413	Propulsion	
MEE 420	Energy Efficient Buildings	
MEE 471	Design of Thermal Systems	
MEE 472	Design of Environment	
MEE 473	Renewable Energy Systems	
MEE 478	Energy Efficient Manufacturing	
MEE 493H	Honors Thesis	3
MEE 511	Advanced Thermodynamics	
Any approved engineering energy/sustainability related elective		
Total Hours		21

## Minor in Aerospace Engineering (AAE)

This minor is open to chemical, civil and mechanical engineering majors. The program provides a strong background for career specialization in the fields of aircraft and aerospace engineering.

Select four courses from:		12
AEE 558	Computational Fluid Dynamics	
MEE 225	Introduction to Flight	
MEE 401	Aerodynamics	
MEE 409	Aerospace Structures	
MEE 425	Aerospace Design	
MEE 440	Flight Vehicle Performance	
MEE 413	Propulsion	
Approved AEE related elective		
Total Hours		12

## Minor in Mechanical Systems (MES)

This area concentrates on the study of design and analysis as well as modeling and control of mechanical systems. The activities in this area include, but are not limited to, computer-aided design, kinematic synthesis and analysis, acoustics and structural dynamics, noise and vibrations control, system modeling and identifications, and dynamics systems and control.

Select four courses from:		12
ECE 416	Introduction to Industrial Robotic Manipulators	
ECE 545	Automatic Control	
MEE 428	Mechanical Design II	
MEE 430/530	Biomechanical Engineering	
MEE 434/537	Mechatronics	
MEE 490	Special Topics in Mechanical & Aerospace Engineering <sup>1</sup>	
MEE 503	Introduction to Continuum Mechanics	
MEE 519	Analytical Dynamics	
MEE 520	Theoretical Kinematics	
MEE 521	Kinematic Principles in Design	
MEE 522	Geometric Methods in Kinematics	
MEE 523	Engineering Design Optimization	
MEE 535	Advanced Mechanical Vibrations	
MEE 545	Computational Methods for Design	
MEE 546	Finite Element Analysis I	
Total Hours		12

<sup>1</sup> Approval of Department Chair needed.

### First Year

Fall	Hours Spring	Hours
MEE 101	0 CMM 100	3
ENG 100 (Satisfies CAP Writing Seminar)	3 REL 103 (Satisfies CAP First Year Humanities Commons)	3
CHM 123 (Satisfies CAP Natural Science)	3 EGR 103	2
CHM 123L	1 PHY 206 (Satisfies CAP Natural Science)	3
EGR 100	0 MTH 169	4
PHL 103 (Satisfies CAP First-Year Humanities Commons)	3 MEE 104L	1

HST 103 (Satisfies CAP First-Year Humanities Commons)	3 EGR 100	0
MTH 168 (Satisfies CAP Math Requirement)	4 MEE 101	0

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## Second Year

Fall	Hours Spring	Hours
ENG 200 (Satisfies CAP Second Year Writing Seminar)	3 Social Science (Satisfies CAP Social Science)	3
EGR 201	3 EGM 202	3
PHY 207	3 MEE 314	3
MTH 218	4 EGR 203	3
MEE 227L	1 ECE 201L	1
EGR 202	3 MTH 219	3
MEE 200	0 MEE 200	0
	17	16

## Third Year

Fall	Hours Spring	Hours
SCI/MTH Elect	3 Advanced PHL Ethics (Satisfies CAP Crossing Boundaries and Practical Ethical Action)	3
MEE 321	3 MEE 344	3
MEE 312	3 MEE 341	3
MEE 312L	1 MEE 433	1
EGM 303	3 MEE 410	3
MEE 308	3 MEE 410L	1
MEE 415	0 Open Elect	3
	16	17

## Fourth Year

Fall	Hours Spring	Hours
Advanced REL (Satisfies CAP Crossing Boundaries Faith Traditions, Diversity and Social Justice)	3 Advanced HST (Satisfies CAP Crossing Boundaries)	3
Art Study (Satisfies CAP Art Study)	3 MEE 432L	3
MEE 427	3 MEE 460	3
MEE 431L	2 MEE 416	1
MEE 439	4 MEE Elect	3
MEE Elect	3 Open Elect	3
	18	16

Total credit hours: 133

## Courses

### MEE 101. Introduction to Mechanical Engineering. 0 Hours

Weekly meeting of first-semester, first-year mechanical engineering students. Orientation to engineering problem solving and team building through hands on applications.

### MEE 104L. Computer Graphics I. 1 Hour

Fundamentals of engineering graphics and the part that graphical communication plays in engineering. Introduction to computer aided design (CAD).

### MEE 198. Research & Innovation Laboratory. 1-6 Hours

Students participate in (1) selection and design, (2) investigation and data collection, (3) analysis, and (4) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming, and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.

### MEE 200. Professional Development Seminar. 0 Hours

Presentations on contemporary and professional engineering subjects by students, faculty, and engineers in active practice. The seminar addresses topics in key areas that complement traditional courses and prepare distinctive graduates, ready for life and work. Registration required for all sophomore students.

### MEE 225. Introduction to Flight. 3 Hours

An introductory course designed to provide students with a basic understanding of the multitude of disciplines that comprise the aeronautical engineering profession. A background and brief history of flight are covered. Foundational knowledge of aerodynamics, propulsion, aerostructures, aircraft performance and aerospace vehicle design. Laboratory included. Prerequisite(s): PHY 206.

### MEE 227L. Computer Graphics II. 1 Hour

Advanced engineering graphics and graphical communication in engineering; introduction to project design. Prerequisite(s): MEE 104L.

### MEE 298. Research & Innovation Laboratory. 1-6 Hours

Students participate in (1) selection and design, (2) investigation and data collection, (3) analysis, and (4) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming, and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.

### MEE 308. Fluid Mechanics. 3 Hours

An introductory course in fluid mechanics. Fundamental concepts including continuity, momentum, and energy relations. Control volume analysis and differential formulations. Internal and external flows in laminar and turbulent regimes. One-dimensional compressible flows. Prerequisite(s): EGR 202. Corequisite(s): MTH 219.

### MEE 312. Engineering Materials I. 3 Hours

Atomic structure, bonding, and arrangement in solids. Mechanical and physical properties of solids, phase equilibria, and processing of solids. Strengthening methods in solids, principles of material selection, and characteristics of non-ferrous alloys, polymers, ceramic composites, and construction materials. Corequisite(s): EGM 303; MEE 312L.

### MEE 312L. Materials Laboratory. 1 Hour

Conducting mechanical and physical tests on solids including, but not limited to tension, compression, bending, hardness, and impact. Metallographic examination of surfaces. Test standards, data reduction, analysis, interpretation, and written and oral communication of test results. Corequisite(s): EGM 303; MEE 312.

**MEE 314. Computational Methods. 3 Hours**

Detailed introduction to solving engineering problems through programming in the Matlab technical computing software package. Fundamentals of algorithms, including iterative processes, arrays and logic operations. Graphing of 2D and 3D functions. Graphical user interfaces. Focus on engineering applications that utilize the mathematical techniques of linear algebra, statistics and numerical methods. Corequisite(s): MTH 219.

**MEE 321. Theory of Machines. 3 Hours**

Analysis and synthesis of mechanisms using analytical and computer-based techniques. Applications include cams, gears, and linkages such as four-bar, slider-crank, and quick-return mechanisms. Gear train specification and force analysis. Position, velocity, and acceleration analysis and mechanical advantage of a wide variety of linkage systems. Corequisite(s): MEE 314 (for MEE), ECE 203 (for ECE), or equivalent.

**MEE 341. Engineering Experimentation. 3 Hours**

Basic sensors and instrumentation, design of experiments, data acquisition and processing, and uncertainty and statistical analysis of data. Measurement of strain, motion, pressure, temperature, flow and sound. Measurement applications to engineering phenomena or systems. Course will utilize a mix of lecture, laboratory experiments, and demonstrations. Also a term project to provide design of experiment experience. Corequisite(s): EGM 303; MEE 308.

**MEE 344. Manufacturing Processes. 3 Hours**

Casting processes including casting defects and design of castings; metal working processes such as extrusion, forging, rolling and wire drawing; sheet metal forming; welding processes; powder metallurgy and design principles for P/M parts, metal removal processes; forming and shaping plastics and composite materials; rapid prototyping. Design principles for manufacturability. Includes laboratory. Prerequisite(s): MEE 312.

**MEE 398. Research & Innovation Laboratory. 1-6 Hours**

Students participate in (1) selection and design, (2) investigation and data collection, (3) analysis, and (4) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming, and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.

**MEE 401. Aerodynamics. 3 Hours**

Fundamentals of steady and inviscid aerodynamic flows. Emphasis on force and moment determination for airfoils and finite wings. Prerequisite(s): MEE 308.

**MEE 409. Aerospace Structures. 3 Hours**

Structural properties of wing and fuselage sections. Nonsymmetrical bending of skin-stringer wing sections. Shear stresses in thin-walled and skin-stringer multiple-celled sections. Deflection by energy methods. Introduction to finite element stiffness method. Prerequisite(s): EGM 303.

**MEE 410. Heat Transfer. 3 Hours**

Fundamentals of conduction, convection, and thermal radiation energy transfer. Conduction of heat in steady and unsteady state. Principles of boundary layer theory applicable to free and forced convection heat transfer for internal and external flows. Radiation analysis with and without convection and conduction. Prerequisite(s): MEE 308.

**MEE 410L. Thermo-Fluids Laboratory. 1 Hour**

Hands-on opportunities for students to gain knowledge of instrumentation used for temperature, flow, heat, and pressure measurement and to visualize thermo-fluids phenomena in a rich problem solving context. Phenomena to be studied include: boundary layer and separation phenomena, internal flow characteristics, hydraulics, conduction, convection, and combustion. Corequisite(s): MEE 410.

**MEE 413. Propulsion. 3 Hours**

Principles of propulsive devices, aerothermodynamics, diffuser and nozzle flow, energy transfer in turbo-machinery; turbojet, turbo-fan, prop-fan engines; turbo-prop and turboshaft engines. RAM and SCRAM jet analysis and a brief introduction to related materials and air frame-propulsion interaction. Prerequisite(s): MEE 308.

**MEE 415. Professional Development I. 0 Hours**

Presentations on contemporary mechanical engineering subjects by students, faculty, and engineers in active practice; student involvement in professional and service activities. Registration required of all MEE juniors.

**MEE 416. Professional Development II. 1 Hour**

Presentations on contemporary mechanical engineering subjects by students, faculty, and engineers in active practice; student involvement in professional and service activities. Registration required of all MEE seniors.

**MEE 417. Internal Combustion Engines. 3 Hours**

Combustion and energy release processes. Applications to spark and compression ignition, thermal jet, rocket, and gas turbine engines. Emphasis on air pollution problems caused by internal combustion engines. Idealized and actual cycles studied in preparation for laboratory testing of I. C. engines. Prerequisite(s): EGR 202 or permission of instructor.

**MEE 420. Energy Efficient Buildings. 3 Hours**

Provides knowledge and skills necessary to design and operate healthier, more comfortable, more productive, and less environmentally destructive buildings. A specific design target of E/3 (typical energy use divided by three) is established as a goal. Economic, thermodynamic, and heat transfer analyses are utilized. Extensive software development. Prerequisite(s): MEE 410.

**MEE 425. Aerospace Design. 3 Hours**

Capstone Air Vehicle Design project that involves both individual and team-based conceptual and preliminary design and sizing. This course integrates the knowledge acquired from the disciplinary subjects already taken (aerodynamics, aerospace structures, propulsion, flight dynamics and intro to flight) in order to size an air vehicle based on a set of requirements. Prerequisite(s): (MEE 225, MEE 401) or permission of instructor. Corequisite(s): MEE 409, 431L.

**MEE 427. Mechanical Design I. 3 Hours**

Stress and deflection analysis of machine components; theories of failure; fatigue failure of metals. Design and analysis of mechanical components such as gears, shafts, bearings and springs. Prerequisite(s): EGM 303; MEE 321. Corequisite(s): MEE 431L.

**MEE 428. Mechanical Design II. 3 Hours**

Advanced topics in stress and deflection analysis; analysis and design of mechanical elements such as gears, journal and ball bearings, belts, brakes, and clutches; principles of fracture mechanics; failure analysis; machinery construction principles. Contemporary design methods and issues associated with the product development cycle. Prerequisite(s): MEE 427.

**MEE 430. Biomechanical Engineering. 3 Hours**

Application of engineering principles to clinical, occupational, and sports biomechanics topics. The course focuses on biomechanical analysis, particularly kinematics and kinetics of human movement, with emphasis on both research and product design.

**MEE 431L. Multidisciplinary Engineering Design Laboratory I. 2 Hours**

Application of engineering fundamentals to sponsored multidisciplinary-team design projects. In a combination of lecture and lab experiences, students learn the product realization process and project management. Product realization topics include idea generation, proposal development, design specifications, conceptualization and decision analysis. Project management topics include cost estimation and intellectual property management. Design projects progress to the proof of concept and prototype development stages. Prerequisite(s): MEE students: EGM 303, MEE 321, and MEE 344 ECE students: ECE 304 and ECE 314.

**MEE 432L. Multidisciplinary Engineering Design Laboratory II. 3 Hours**

One hour lecture and five hours of lab per week. Focus of the lecture is on engineering project management, including communication, collaboration, project tracking methods, cost estimating, overhead, direct labor, time value of money, depreciation and return on community based sponsors. Detailed evaluation of the Product Realization Process focusing on conceptual design, embodiment design, final design and prototyping. Analysis of the design criteria for safety, ergonomics, environment, cost and sociological impact. Periodic oral and status reports. Culminates in a comprehensive written report and oral presentation. Prerequisite(s): MEE 425 or MEE 427.

**MEE 433. Project Management & Innovation. 1 Hour**

Introduces students and teams to project management, entrepreneurship, and innovation. Topics include project management, cost estimating, time value of money, patent law, marketing, finance, and business plan development. Prerequisite(s): Junior status.

**MEE 434. Mechatronics. 3 Hours**

Emphasis on the integration of sensors, micro-controllers, electromechanical actuators, and control theory in a 'smart' system for a semester long design project. Topics include: sensor signal processing, electromechanical actuator fundamentals, interfacing of sensors and actuators to micro-controllers, digital logic, and programming of micro-controllers, programmable logic controllers and programmable logic devices. Equal mix of lecture and laboratory. Prerequisite(s): ECE 323.

**MEE 438. Robotics & Flexible Manufacturing. 3 Hours**

Overview of industrial robots; physical configuration, operation, and programming of robots; actuators, drive mechanisms, sensors, vision systems, controls, and control methods for robots; economic considerations; and automated factory concept. Prerequisite(s): MEE 321.

**MEE 439. Dynamic Systems & Controls. 4 Hours**

Dynamic systems modeling with special emphasis on mechanical systems (one and two degrees of freedom). Covers both transfer function and state space modeling techniques. Analogues drawn between mechanical, electrical, fluid, and thermal physical domains. System nonlinearities and model linearization methods are discussed. Analytical solutions of linear ordinary differential equations using Laplace transformation and state space theory. Feedback control theory, including root locus and frequency response techniques. Prerequisite(s): EGM 202; MTH 219.

**MEE 440. Flight Vehicle Performance. 4 Hours**

This course is intended to introduce the student to the flight mechanics of aerospace vehicles. Some familiarity with aircraft performance, static stability and control is assumed, but not required. We will use modern analysis methods to develop the topical details including: 1) a study of aerodynamics involved in-flight vehicle motion to obtain an understanding of influence coefficients; 2) use of linear algebra to develop a rational approach to modeling aircraft dynamics; 3) an introduction to modern control theory methodology; and 4) problems and examples that illustrate the use of desktop computational tools currently available. Prerequisite(s): (EGM 202; MEE 401, MEE 225; MTH 219) or permission of instructor.

**MEE 456. Energy Systems Engineering. 3 Hours**

This course is aimed at providing fundamental knowledge of thermodynamics, fluid mechanics, and heat transfer in context of Energy Systems Engineering. A Just-in-Time approach to learning and applying these topics will be used. Projects will anchor all class activities. In addition to providing knowledge and experience of thermodynamics, fluid mechanics, and heat transfer, this course seeks to provide students the analysis skills necessary to determine the importance of energy conversion technologies, with special emphasis on energy efficiency and renewable energy (tidal, hydroelectric, wind, solar and geothermal). Corequisite(s): MEE 410.

**MEE 457. Building Energy Informatics. 3 Hours**

The focus of the course is the collection and analysis of energy data sets to reduce energy consumption and/or energy demand. Students will typically utilize monthly energy data from multiple buildings, real time energy data, and building energy audit data. Students will disaggregate/aggregate data to develop energy use benchmarks, identify priority buildings/actions for energy reduction, identify problems, and estimate savings. Programming in Matlab and an introduction to sql dbase management are covered. Corequisite(s): MEE 410.

**MEE 460. Engineering Analysis. 3 Hours**

Case study approach to engineering problem solving. Emphasis on breaking down problems to tractable parts, modeling physical systems and selection of solution techniques. Problems related to thermal, fluid, structural, and dynamic systems. Problems typically involve solution of ordinary and partial differential equations, Fourier analysis of periodic behavior, simulation, optimization and/or statistical analysis. Analytical and numerical solution techniques, with an emphasis on selecting the most appropriate technique and understanding the limitations of the analysis. Prerequisite(s): MEE 410.

**MEE 461. Solar Energy Engineering. 3 Hours**

This course will cover the theory, design and application of two broad uses of solar energy: (i) direct thermal and (ii) electrical energy generation. The majority of the course will focus on thermal applications, with emphasis on system simulation and design for buildings and other systems. This course will expose students to the development and use of solar design and simulation tools. Most of the tools will be implemented in Excel and TRNSYS, but students are welcome to use other software tools such as Engineering Equation Solver, (EES) or MATLAB. Some of the class time will be devoted to demonstrate the development and use of these tools to solve homework problems. Corequisite(s): MEE 410.



**MEE 462. Geothermal Energy Engineering. 3 Hours**

This course will cover the theory and design of three broad uses of geothermal energy: (i) heat pump applications, (ii) direct uses, and (iii) electrical energy generation. The majority of the course will focus on heat pump applications, with emphasis on ground heat exchanger simulation and design for buildings and other systems. Closed-loop, open-loop, and hybrid geothermal heat pump systems will be examined. Heating, cooling, and electricity generating applications using hot geothermal reservoirs will also be discussed. This course will expose students to the development and use of geothermal design and simulation tools. Most of the tools will be implemented in Excel, but students are welcome to use other software tools such as Engineering Equation Solver (EES) or MATLAB. The course notes explain the development and use of these tools, which will be used to solve homework problems. Corequisite(s): MEE 410.

**MEE 463. Wind Energy Engineering. 3 Hours**

Introduction to wind energy engineering, including wind energy potential and its application to power generation. Topics include wind turbine components; turbine fluid dynamics and aerodynamics; turbine structures; turbine dynamics, wind turbine controls; fatigue; connection to the electric grid; maintenance; web site assessment; wind economics; and wind power legal, environmental, and ethical issues. Corequisite(s): MEE 410.

**MEE 464. Sustainable Energy Systems. 3 Hours**

Survey of conventional fossil-fuel and renewable energy with an emphasis on system integration. Basic concepts of climate physics will be addressed along with estimates of fossil resources. Corequisite(s): MEE 410.

**MEE 471. Design of Thermal Systems. 3 Hours**

This course integrates thermodynamics, heat transfer, engineering economics, and simulation and optimization techniques in a design framework. Topics include design methodology, energy analysis, heat exchanger networks, thermal-system simulation and optimization techniques.

**MEE 472. Design of Environment. 3 Hours**

Emphasis on design for environment over the life cycle of a product or process, including consideration of the mining, processing, manufacturing, use, and post-life stages. Course provides knowledge and experience in invention for the purpose of clean design, life cycle assessment strategies to estimate the environmental impact of products and processes, and cleaner manufacturing practices. Course includes a major design project.

**MEE 473. Renewable Energy Systems. 3 Hours**

Introduction to the impact of energy on the economy and environment. Engineering models of solar thermal and photovoltaic systems. Introduction to wind power. Fuel cells and renewable sources of hydrogen.

**MEE 478. Energy Efficient Manufacturing. 3 Hours**

This course presents a systematic approach for improving energy efficiency in the manufacturing sector. Current patterns of manufacturing energy use, the need for increased energy efficiency, and models for sustainable manufacturing are reviewed. The lean-energy paradigm is applied to identify energy efficiency opportunities in industrial, electrical, lighting, space conditioning, motor drive, compressed air, process heating, process cooling, and combined heat and power systems. Prerequisite(s): (EGR 202 or equivalent) or permission of instructor.

**MEE 490. Special Topics in Mechanical & Aerospace Engineering. 3 Hours**

Particular assignments to be arranged and approved by the department chairperson.

**MEE 493H. Honors Thesis. 3 Hours**

Selection, design, investigation, and completion of an independent, original research study resulting in a document prepared for submission as a potential publication and a completed undergraduate thesis. Restricted to students in University Honors Program.

**MEE 494H. Honors Thesis. 3 Hours**

Selection, design, investigation, and completion of an independent, original research study resulting in a document prepared for submission as a potential publication and a completed undergraduate thesis. Restricted to students in University Honors Program. Prerequisite(s): MEE 493.

**MEE 498. Research & Innovation Laboratory. 1-6 Hours**

Students participate in (1) selection and design, (2) investigation and data collection, (3) analysis, and (4) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming, and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.

**MEE 498H. Research&Innvtn Lab. 1-6 Hours**

Students participate in (1) selection and design, (2) investigation and data collection, (3) analysis, and (4) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming, and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.

**MEE 499. Special Problems in Mechanical & Aerospace Engineering. 1-6 Hours**

Particular assignments to be arranged and approved by department chairperson.



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